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Research Paper

Examining the Visual Impact of Object Typeface on Event Participation

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ABSTRACT

We argued that elaborate and inharmonious design evokes greater interest in a brand, although Gestalt psychology scholars thought that harmonious and straightforward designs are more liked. The study used object typeface patterns to show cross-modal correspondence between typeface physical appearance and participant's emotions on event participation in three experiments of between-subject designs. Participants ($N=480$) in three emotional valences in two levels, 160 (80 pleasure and 80 displeasure), 160 (80 arousal and 80 unaroused), and 160 (80 dominance and 80 submissive) to examine the visual impact of object typeface on event participation. The findings from the three experiments revealed a significant effect of object typeface on event participation. Additionally, we observed a positive and significant effect of the three emotional valences (pleasure, arousal, and dominance) on event participation, demonstrating a cross-modal interaction and substantial bias effect of heuristic on systematic processing. At the same time, motivation mediated the relationship between object typeface and event participation. The theoretical and managerial implications are discussed.

Keywords: Cross-modal correspondence, event participation, discursive resources, object typeface, emotional valence, visual effects.

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1. INTRODUCTION

Over the past 600 years, numerous prior studies have proposed and investigated typefaces rhetoric, influence, semantics, roles, appropriateness, and character. Even so, how consumers and event participants visualise, perceive, and interact with objects as fonts and typeface of brand names, as well as how the typeface degree of complexity and degree of ambiguity cognitively and affectively influence the decision of event participants, is still unknown (Murwonugroho & Yudarwati, 2020). In addition, previous studies have not fairly conceptualised object typefaces as discursive resources and as a means of influencing consumers such as Wang et al. (2020), Venkatesan et al. (2020), Wang et al. (2020), Rolschau et al. (2020). For example, New York City DOT Summer Street Event purposefully used different spare parts of a bike as fonts and typeface to spell "Bike" in an advertisement. This deviation from the conventional typeface was intended to create visual ambiguity and multiple interpretations that are not rare in so many unconventional advertisements nowadays. However, this fact contradicts the Gestalt psychology scholars' claim that simple and harmonious designs are more popular than complicated and inharmonious ones (Niedenthal & Wood, 2019; Metwally, 2021; Ye et al., 2021).

Previous research has demonstrated that typography may draw viewers' attention to a brand. For example, handwritten typefaces generate discernments of human presence that coordinate a favourable evaluation and behaviour by facilitating emotional attachment between the consumers and the products (Schroll et al., 2018). When uppercase is used in green advertising and tagline, people indicate more fear and exhibit more serious environmental concern (Song & Luximon, 2019). The knowledge about typography, reading, and visual perception progress an understanding of the visual functioning of letterforms (Zender, 2019). The meaning consumers assign to a typeface is the same as the meaning they assign to a product and company in question (Doyle & Bottomley, 2006, Henderson et al., 2004). These studies elucidate cross-modal interaction, which refers to the propensity to match dimensions across sensory modalities such as visual appearance and emotions (Spence, 2011; Lin et al., 2021). Besides, advertisers and companies purposefully manipulate and choose objects as fonts of different sizes, word

arrangements, designs, and dress-up typeface as a brand spokesperson, which cross modally interact and arouse consumer's attention to facilitate multiple interpretations and favourable decisions, (Henderson et al., 2004). Thus, Olkhovich (2019) points out that text and fonts interact with the audience. Irrespective of the graphic designer's attempts to keep the design or fonts appear unbiased as possible, the chosen fonts communicate something. Meanwhile, Sadok (2017) suggested that fonts play a fundamental role in the visual structure and regulate the frame of mind, arouse emotions, and facilitate the formation of opinion prior to reading or inferring meaning to the text. Not only that, but the text acts as a secret agent of visual communication, operating unintentionally from the viewer.

Massively utilising conventional typefaces and fonts in advertisements has limited viewers' attention to the brand message. In contrast, objects and materials are used to form typefaces, which increasingly interact with the viewer's attention and effectively move them toward beneficial behavioural changes (Olkhovich, 2019). Furthermore, typography can generate its heuristics without considering the connotation of the text (Amar et al., 2017). Additionally, from a psychological standpoint, physical features of the typeface (font style, size, and colour) impact text readability, and a typeface is a set of fonts that share compositional properties, allowing for the visual texture of written words in advertisements (Deng & Fligner, 2019).

Our study fills a gap in the literature and examines cross-modal interaction effects between the physical appearance of object fonts and participants emotions. Essentially, typographers classify typefaces into four main grades: arousal, dominance, pleasure, comforting, and noticeable, and the more decorative the typestyle is, the more appealing, engaging, and reassuring (Amar et al., 2017). In the meantime, Puškarević et al. (2018) mention that typefaces are designed for a purposeful and connotative effect, which enhances their impact on the audience. Typefaces are collectively acceptable font's characteristics that make it possible to distinguish one typeface from another.

The structure of the paper is as follows. First, we started with a literature review to establish the relationship between the object typeface, and the decision to participate in an event. Second, we outline a methodological approach to address research objectives to facilitate a clearer understanding of the entire process. Third, we present our findings and identify the basis for a heuristic system model that classifies the persuasive information processing an individual finds

in any given persuasive message. Finally, we conclude with a discussion, practical and theoretical contributions and recommendations for future research.

2. LITERATURE REVIEW

Every day, we see fonts of different sizes and weights on our housing unit numbers, elevators, and billboards (Wang et al., 2020), and viewers acknowledge that visually and legible typeface inspires people to carry on with interpretation and even progresses to understanding activities (Qiu et al., 2020; Slattery & Rayner, 2010). Essentially, Struppek (2014) asserted that people are fascinated by novel and unique visual layouts. Wang et al. (2020) averred that many businesses realise that typefaces are an essential visual aspect that engages people at a glance and influences the value and success of a brand's image.

An emergent body of academic research has shown that typography affects people's ability to process ad information. For example, Wang et al. (2020), Rath (2020), Puškarević et al. (2018), Celhay et al. (2015), Rolschau et al. (2020), Velasco et al. (2015), Ottaway (2020), Xu et al. (2017) These findings underscore the impact of fonts on audiences to more favourably evaluate brand messages. Hence, Wang et al. (2020) confirmed that consumers prefer hedonic products when the font in brand packaging is circular. At the same time, viewers perceived iconic letterforms to arouse connotation, which develops in less undeviating, unforeseeable, and less allusive ways (Rath, 2020). As such, font complexity positively impacts consumer visual attention and attitude (Puškarević et al., 2018). While, Celhay et al. (2015) perceived that exotic typefaces could communicate exact foreign origin, mainly when the typeface's connoted meaning corresponds to the text has signified meaning. In addition, the typical transaction range was smaller because customers preferred the rounded (vs angular) font condition, and they purchased more sour beer alternatives in this condition (Rolschau et al., 2020). Besides, Velasco et al. (2015) found a significant correlation between roundness/angularity, ease of processing, and typeface-like, which determines the connection between typography and taste. Furthermore, lowercase wordmarks elicited a stronger sense of warmth, while uppercase elicited a stronger sense of authority (Xu et al. (2017). Typeface influence on the viewer's attention is quite significant because of the embedded visual and emotional attachment that makes the typeface irresistible.

H1: People exposed to pleasure typeface ads elicit more favourable event participation than participants exposed to displeasure font ads.

Correspondingly, human typography has been described as having the ability to provide a human presence for viewers and readers (Schroll et al., 2018). In a recent study on human writing typefaces, Schroll et al. (2018) showed that handwritten typefaces create sensitivities of humanoid presence, which encourage more favourable product appraisals and behaviour. In addition, Huang & Liu (2020) proposed that donation appeals that combine warm-hearted messages with handwritten fonts and ability-dense messages with machine-written fonts can increase donation willingness and brand loyalty. Meanwhile, Kim et al. (2020) also discovered that when employing handwriting rather than sans-serif, people are more likely to engage with the content and that engagement is more likely to build favourable sentiments toward the typeface. Liu et al. (2019) found that using a handwritten typeface provides a competitive edge by communicating a sense of personal touch, which leads to the notion that love is symbolically embedded in the restaurant's services.

On the other hand, when designers add extra graphics to a letterform skeleton to form an embellishment display that facilitates attractiveness or maximizes the visual appearance of the typeface, viewers consider it to be an elaborate and inharmonious design. As such, Wagner & Charinsarn (2021), Nedeljković et al. (2017), and Beier et al. (2017) showed that unique letters, distinct deviations from the general structure of lightness or skeleton, emphasising certain features, and swashed features had a more significant impact on readability than reversed letter strokes or shading. However, Nedeljković et al. (2017) found that subjects rated font brightness as unusually elegant, feminine or loud, masculine, cold, and arrogant. Wagner & Charinsarn (2021) stated that the effect is minor since unique typography is only a minor hint on the product box. Moreover, typeface not only has the power to influence consumer ability to comprehend advertisement-based brand messages, but the effects of diverse typographic qualities are highly interactive (McCarthy & Mothersbaugh, 2002). Designing a typeface with extra graphic efforts is essential towards attracting audience attention to the brand.

H2: People exposed to arousal typeface ads elicit more favourable event participation than participants exposed to aroused font ads.

Streams of past research on typeface persona, traits, and nonconforming lettering cases have yielded insightful thoughts on the physical features of typeface and their effect on viewers, allowing the study to propose a comprehensive framework. More significantly, Nedeljković et al. (2017) and Wagner & Charinsarn (2021) research has proven that the physical properties of fonts are important in influencing a brand's good behaviour. Hence, they failed to capture the physical appearance of object fonts and how it is used as discursive resources to elicit cross-modal interactions between fonts and participant emotions. This study captures object fonts as discursive resources and shows how it is used to stimulate favourable event engagement. We, therefore, expect that pleasure, arousal, and dominance typeface ads will result in a better decision to participate in an event because it is acknowledged that people's emotional connections with stimuli serve as one of the essential pillars around which cross-modal associations are built.

H3: People exposed to dominance typeface ads elicit more favourable event participation than participants exposed to submissive font ads.

2.1 Heuristic Systematic Model

Consistently, brand messages are conveyed through visual communication and how consumers process the information remains valuable for various academic and practical fields. However, the heuristic system model clarifies how individuals choose and use two processing modes to process information in any persuasive communication (Chaiken, 1980). Thus, heuristic information processing can occur concurrently with systematic information processing. The two can interact throughout the decision-making process (Zhang et al., 2014), which is the starting point of persuasion (Xiao et al., 2018). The bias effect emphasises that heuristic processing may indirectly impact individuals' assessments by biasing systematic processing because heuristic cues may impair individuals' capacity to validate systematic cues (Shi et al., 2021).

Likewise, Zhang et al. (2014) Shi et al. (2021) averred that the heuristic pathway is a process in which people analyse a few informational cues, or even just one, and make illogical decisions based on restricted signals as visuals, colour, and forms. Based on a heuristic standpoint, essential clues may directly influence the receiver's propensity to accept the message's conclusion without necessarily altering the reception or acceptance of arguments (Chaiken, 1980). Heuristic processing is a narrow mode of processing of information that demands less

thinking effort and less cognitive resources (Li et al., 2018). Meanwhile, Li et al. (2018) said that systematic processing necessitates considerable work to read, analyse, and capture information from a source. More so, systematic information processing is a process individuals carefully consider all essential bits of information, expand on them, and reach a conclusion based on these elaborations (Guo et al., 2020).

Extant studies have used the heuristic systematic model in various perspectives such as health communication, information technology, communication, psychology, and business administration. For example, Qahri-Saremi & Montazemi (2019), Xiao et al. (2018), and Guo et al. (2020), these studies revealed diverse ways individuals are influenced or concurrently influenced. They perceived that heuristic systematic model is used to untangle several ways in which these elements might affect eWoM message acceptance, and the relative relevance of these aspects is determined by their overall effects on eWoM message and adoption (Qahri-Saremi & Montazemi, 2019). At the same time, Xiao et al. (2018) believed that trustworthiness, social influence, argument quality, and information engagement are vital aspects influencing consumer perceived information credibility on YouTube. Additionally, compared to negative online customer evaluations and positive online evaluation increases the possibility of favourable purchase decisions (Guo et al., 2020).

Meanwhile, social commerce has also used heuristic systematic models such as Yeon et al. (2019), Hamelin et al. (2020), and Wall & Warkentin (2019). These studies revealed how different routes facilitate purchase decisions by influencing their judgment over a brand. It is perceived that Heuristic factors have a considerable influence on purchasing behaviour, but systematic elements have a significant effect on attitude and purchase intention (Yeon et al., 2019). Besides, Hamelin et al. (2020) found that the emotive tale was more successful and faster in changing respondents' perceptions, the cognitive method resulted in longer-lasting attitudinal change and more instantaneous adjustments in attitude, but cognitive storytelling resulted in greater elaboration and thus, higher retention. Additionally, the quality of an argument raises perceptions of response efficacy and compliance intentions (Wall & Warkentin, 2019). It is clear that the heuristic system model facilitates a clear understanding of the judgmental process of any persuasive message (Xiao et al., 2018).

2.2 Mediation Role of Motivation

According to Ryan & Deci (2020), intrinsic motivation pertains to actions completed for their own sake or their innate interest and enjoyment. Beyond that, Wang et al. (2021) mentioned that intrinsic motivation refers to people's inner motivations that drive and lead their activities toward a goal. More specifically, once an individual receives a signal from an external stimulus, the cognitive process that they will perform an activity may awaken their desired intrinsic motivation. This activity happens due to people's willingness and inner enjoyment, which drives them to engage freely because of internal incentives rather than external rewards or punishment (Wang et al., 2021). The willingness to engage or interact with the physical attribute of object typeface stimulus is essential because it is the fundamental element and driving force towards eliciting behavioural change. Hence, Taat and Ariffin (2021) mentioned that motivation is a variable that guides and encourages an individual to accomplish a task to achieve the goals set. Meanwhile, Mosqueda et al. (2019) indicated that motivation is a fundamental element toward achieving commitment and adherence to the stimulus presented because it directs and dictates the subject's conduct and activities. Correspondingly, Standage et al. (2003) pointed out that motivation is a behavioural engagement used to derive pleasure and satisfaction from direct engagement.

Previous studies have used motivation as a mediating variable in various studies. For example, Taat & Ariffin (2021), Guterresa et al. (2020), Mosqueda et al. (2019), and Feng et al. (2018) revealed that motivation is a crucial mediator. Especially in terms of human capital, employee performance, coaching empowerment climate, and intrinsic motivation for self-presentation, self-efficacy, and fun. As such, Guterresa et al. (2020) perceived the impact of leadership style on employee performance, but not education training in terms of motivation. Motive plays an essential role by engaging and facilitating audience participation and processing of information.

In the case of object fonts, the apparent attractiveness of the object font can serve as external cues that signal participants emotion towards event participants. When an event participant views the object font appeal, the participant will receive a valuable piece of information about the event. From what they know, this event may trigger the object's internal cognitive and affective processing and provide additional benefits to the event. However, the internal motivation may

direct the event participant's attitude toward participating (Wang et al., 2021). Hence, we propose the following assumptions:

H4: pleasure¹, arousal² and dominance³ ads leads to more motivation than displeasure, unaroused and submissive typeface ads

H5: Motivation mediates the positive relationship between object typeface and event participation.

3. EXPERIMENT 1

3.1 Method and materials

Stimuli, Participants and Procedure

A between-subject design experiment with two manipulated conditions, pleasure (pleasure vs. displeasure) was designed to investigate the effect of pleasure object fonts on event participation and the mediating role of motivation on the relationship between object typeface and event participation. The pleasure or displeasure of the object typeface and event participation represent the between-subjects of the experiment.

The experimental stimuli (Figure 1) were based on the function of the design characteristics, semantic associations, and physical characteristics of the typeface established in previous studies (Nedeljković et al., 2017; Henderson et al., 2004; Childers & Jass, 2002). The font chosen for the study is the New York City DOT Summer Street Event Ad that includes artful deviation, sneakers, and baby stroller to design (WALK). We recreated the ads by altering the background and slogan without a logo or brand name. The object fonts are designed to facilitate an experience with the physical properties of the font. Hence, the object typeface category was selected to facilitate participants' exposure, experience, and understanding of object typeface features. The non-artful deviation advertisement version (plain typeface and a slogan), without a logo and no brand name.



Figure 1. Pleasure Object Typeface



Displeasure Object Typeface

The first NYC DOT summer street event advertising was chosen because of the typeface's suitability, newness, and distinctiveness to the research environment. Notably, the advertisement incorporates a slight bias that catches the viewer's attention. The physical appearance determines how the text will be understood or processed, and designers are working hard to create typefaces that attract more attention to relevant brands (Oderkerk & Beier, 2021).

The researcher informed the participants that the experiment was for their neighbourhood's sports and fitness event. The participants were randomly assigned to one of the two conditions (pleasure vs displeasure). However, the pleasure treatment was designed with an object typeface advertisement and a slogan without a logo or brand name. At the same time, the displeasure condition was a simple font ad with a slogan, no logo, and no brand name.

Overall, 160 (80 pleasure and 80 displeasure) adult participants in both treatment condition groups saw only one object font advertising condition before filling out a questionnaire. However, the first experiment participants were recruited through an online survey-embedded experiment (Matthes & Schmuck, 2017) from various social media platforms such as Weibo, Facebook, Instagram, Linden, WhatsApp, and Telegram using convenient sampling. The study focused on men and women between the ages of 19 and 46 who used the social media platform, as the ad was all about exercise and fitness and required prime-age adults, (Table 1. Appendix).

Measures

The pleasure was measured using six pleasure subscales (Bradley & Lang, 1994; Henderson et al., 2004). Participants rated pleasure on 7-point semantic differential bipolar extreme adjectival scales: unpleasant-pleasant, bored-relaxed, unsatisfied-satisfied, unattractive-attractive, unhappy-happy, non-innovative-innovative, and. Six questions measuring pleasure and intention to participate in the forthcoming event were factor analysed using principal component analysis and varimax (orthogonal) rotation. The analysis yielded two factors that adequately explained the association of the entire items loaded. For pleasure ad, (Pleasant: $EV=3.9$, $R^2 = 64.9\%$, $\alpha = .90$) (Relaxed: $EV = 1.203$, $R^2 = 20.1\%$, $\alpha = .95$).

The motivation was assessed using the five intrinsic subscales used in motor motivation (Pelletier et al., 2013). In order to ensure that the participants were motivated to participate in the

event through the typeface, they were asked to assess motivation on a 5-point Likert scale ranging from 1 (strongly disagreed) to 5 (strongly agreed).

The dependent variable (event participation) was assessed using six subscale items (Zhou et al., 2021). Therefore, to gain insight into the reciprocity of participants' participation in the upcoming event, they were asked to rate their opinion on a 7-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

3.2 Results

Manipulation Check

Of the study participants, 90% of respondents on pleasure ad indicated that object typeface is pleasant and attractive. To verify whether the experimental manipulation was effective, participants rate the extent of their agreement that pleasure typeface ads influence their intention to participate in the event. An independent sample t test result indicated that pleasure typeface ads ($M=40.900$, $SD=2.01$) compared to displeasure typeface ads ($M=9.4500$, $SD=5.697$) demonstrating statistical significant effect $t(158)=46.57$, $P<.001$. The pleasure typeface ads with statistically significantly larger mean than displeasure typeface ads, which indicated the effect treatment.

To test whether ads with pleasure fonts elicit more favourable event participation than displeasure fonts (H1). We performed a one-way ANOVA to determine the effect of pleasure font advertising on event participation as a dependent variable. The Table 3. ANOVA result indicated a significant effect of pleasure typeface ads on event participation at $p<.05$ level $F(1,158)=2168.272$, $p<.001$). This result supports H1, which explores that pleasure font ads will elicit more favourable campaign engagement than displeasure fonts.

Table 3. ANOVA Result for Pleasure and displeasure Typeface on Event Participation.

Source	df	S.square	Means Squared	F.value	Sign val.(p)
Between Groups	1	39564.100	39564.100	2168.272	.000
Within Groups	158	2883.000	18.247		
Total	159	42447.100			

Mediation analysis for pleasure ads

We used mediation analysis to test the mediation hypothesis proposed in H4¹ that pleasure fonts ads lead to higher motivation for event participation than displeasure fonts ads. We conducted

mediation analysis using the Process v2.15 macro in SPSS (Hayes, 2013; model 4). The outcome variable is event participation and the predictor variable for the analysis is pleasure typeface ads. Whereas, the mediator variable for the analysis was motivation.

The path direct effect of pleasure font ads on motivation was not significant ($\beta = .0007$, $SE = .0180$, $p = .9679$). The direct effect of motivation on event participation is positive and significant ($\beta = 1.2030$, $SE = .0314$, $p = .001$), indicating that a person scoring higher on motivation is more likely to elicit favourable event participation

Furthermore, the indirect effect (IE=.6709), is statistically significant: 95% C.I= (.6469, .7048). Indicated motivation mediated the relationship between pleasure font ads and event participation H5.

3.3 Discussion

The experimental results provide evidence for the effect of pleasure font advertising on event participation and the indirect effect of motivation on the relationship between pleasure font advertising and event participation. Pleasure font ad leads to more favourable event participation. Experiment 1 expanded on previous research on fonts as it revealed the effect of pleasure font ads on event participation. Given that Experiment 1 focused entirely on unfamiliar object fonts, it is necessary to verify whether similar font patterns would appear in different contexts.

4. EXPERIMENT 2

4.1 Method and materials

Stimuli, Participants and Procedure

A between-subject design experiment with two manipulated conditions, arousal (arousal vs unaroused) was performed to investigate and complement the first experiment. The arousal or unaroused of the object typeface were the between subject factors. Motivation was the mediator and event participation is the dependent variable.

The second experimental stimuli (Figure 2) were based on the previous studies' characteristics. (Phillips & McQuarrie, 2004; Phillips & McQuarrie, 2009; Nedeljković et al., 2017; Henderson et al., 2004). The NYC DOT summer street event advertisement of "BIKE" includes an artful deviation in the typeface design. Like the first experiment, the second ad for the NYC DOT

summer street event was recreated by changing the background and slogan without the logo and brand name. Non-artful ad format (simple font and tagline), no logo, no brand name.



Figure 2. Arousal Object Typeface



Unaroused Object Typeface

The second NYC DOT summer street event advertisement was selected in line with the first experiment because of the appropriateness of the typeface used, novelty, and uniqueness to the context of the study. Notably, the ad employs a subtle bias that grabs the viewer's attention. Despite the general preference for sans-serif typefaces, designers have been creating a range of typefaces away from traditional fonts due to their impact on reading (Gao et al., 2019)

Generally, 160 (80 arousal and 80 aroused) adult participants in both treatment condition groups saw only one object font advertising condition, contributing to the second online survey-embedded experiment (Matthes and Schmuck, 2017). However, using convenient sampling, the participants were recruited like first experiment, through various social media platforms such as Weibo, Facebook, Instagram, Linden, WhatsApp, and Telegram. The study focused on men and women between the ages of 19 and 46 who used the social media platform, as the ad was all about exercise and fitness and required prime-age adults, (Table 1. Appendix)

Measures

In the second experiment, arousal was assessed using the six arousal subscales (Mehrabian & Russell, 1974). The participants appraised arousal on 7-point semantic differential bipolar extreme adjectival scales from 1 to 7, negative adjective from left to right, and positive adjective from right to left: relaxed-stimulated, calm-excited, sluggish-frenzied, dull-jittery, sleepy-wide awake, unaroused-aroused. We factor analysed six-question measuring arousal and intention to participate in the forthcoming event using principal component analysis and varimax (orthogonal) rotation, and the analysis yielded one factor that adequately explained the association of the entire items loaded. For arousal advertisement (stimulated: $EV = 5.64$, $R^2 = 94\%$, $\alpha = .93$).

4.2 Results

Manipulation Check

Of the arousal font ad participants, 73% felt aroused with the arousal ad towards the forthcoming event. To authenticate whether the experimental manipulation was effective, participants rate the extent of their agreement that arousal typeface ads influence their intention to participate in the event. Independent sample t-test result indicated that arousal font ad ($M=36.08$, $SD=9.81$) compared to unaroused typeface ads ($M=7.65$, $SD=2.26$) demonstrating statistical significant effect $t(158)=25.26$, $P<.001$. The arousal typeface ads with a statistically significantly than unaroused typeface ads, which indicated the effectiveness of treatment.

Similarly, we tested whether arousal will cause more favourable event participation than unaroused typeface (H2). Participants were randomized into two groups (arousal and unaroused), and we used one-way ANOVA to see how arousal advertisement affected event participation as the dependent variable. The Table 4. ANOVA result revealed a significant effect of arousal advertisement on event participation at $p<.05$ level, $F(1,158)=638.165$, $p<.001$, which supports H2—indicating that people exposed to arousal elicited more favourable event participation than the unaroused typeface.

Table 4: ANOVA Result for Arousal and Unaroused Typeface on Event Participation.

Source	df	S.square	Means Squared	F.value	Sign val.(p)
Between Groups	1	32319.23	32319.23	638.17	.000
Within Groups	158	8001.75	50.64		
Total	159	40320.98			

Mediation analysis for arousal ads

To evaluate the hypotheses predicted in H4², arousal leads to a higher motivation to event participation than unaroused. We appraised a mediation analysis using the Process v2.15 macro in SPSS (Hayes, 2013; model 4). Since the study is between subject factorial designs, we had to conduct separate analyses to test the effects of arousal advertisements. The dependent variable was event participation. The independent variable for the analysis was arousal. At the same time, the mediator variable for the analysis was motivation.

Nevertheless, path direct effect of arousal to motivation is positive and significant ($\beta = .6967, SE = .0159, p = .001$), indicating that persons scoring higher on arousal are more likely to elicit favourable event participation. The direct effect of motivation on event participation is positive and significant ($\beta = .944, SE = .023, p = .001$), indicating that a person scoring higher on motivation are more likely to elicit favourable event participation. Likewise, the indirect effect ($IE = .659$) is statistically significant: 95% *C.I.* (.645, .670). Indicating that motivation mediated the relationship between object typeface arousal and event participation H5.

4.3 Discussion

Experiment 2 results provide similar evidence to experiment 1 uniquely on the effect of arousal typeface ads on event participation. Additionally, the indirect effect of motivation on the relationship between arousal typeface ads and event participation. The arousal font ad elicited more favourable event participation than unaroused ads, which expanded prior studies on typeface physical appearance influence viewers.

5. EXPERIMENT 3

5.1 Method and materials

Stimuli, Participants and Procedure

A between-subject design experiment with two manipulated conditions, dominance: (dominance vs. submissive) was performed to investigate and complement the first and second experiment. The dominance or submissive of the object typeface was the between-subject factor. The motivation was the mediator, and event participation was the dependent variable.

The third experimental stimuli combined the first and second experiment stimuli (Figure 3) based on the previous studies' characteristics. (Phillips & McQuarrie, 2004; Phillips & McQuarrie, 2009; Nedeljković et al., 2017; Henderson et al., 2004). The NYC DOT summer street event advertisement "BIKE and WALK" includes an artful deviation in the typeface design. Like the first and second experiments, the third ad combined the two experiment stimuli by altering the background and slogan without the logo and brand name. Non-artful ad format (simple font and tagline), no logo, no brand name.



Figure 3. Dominance Object Typeface



Submissive Object Typeface

Mostly, 160 (80 dominance and 80 submissive) adult participants in both treatment condition groups saw only one object font advertising condition, contributing to the second online survey-embedded experiment. However, using convenient sampling, the participants were recruited, like the first experiment, through various social media platforms such as Weibo, Facebook, Instagram, Linden, WhatsApp, and Telegram. The study focused on men and women between the ages of 19 and 46 who used the social media platform, as the ad was all about exercise and fitness and required prime-age adults. (Table 1. Appendix)

Measures

In the third experiment, dominance was measured using six dominance subscales (Mehrabian & Russell, 1974; Bradley & Lang, 1994). Rated on 7-point semantic differential bipolar extreme adjectival scales from 1 to 7, negative adjective from left to right and positive adjective from right to left: uncontrolled-controlling, insignificant-influential, guided-free, unimportant-important, disgusting-captivating, submissive-dominance. The factor analysed six questions measuring dominance and intention to participate in the forthcoming event were factor analysed using principal component analysis and varimax (orthogonal) rotation. The analysis yielded two factors that adequately explained the association of the entire items loaded. For dominance ad (Controlling: $EV=3.04$, $R^2 = 50.65\%$, $\alpha = .54$) (Influential: $EV = 1.68$, $R^2 = 28.05\%$, $\alpha = .76$).

5.2 Results

Manipulation Check

Of the dominance font ad participants, 95% felt controlled by the dominance font ad towards intention to participate in the forthcoming event. To scrutinize whether the experimental manipulation was effective, participants rate the extent of their agreement that dominance typeface ads influence their intention to participate in the event. Independent sample t-test result indicated that dominance font ad ($M=40.35$, $SD=2.72$) compared to submissive typeface ads ($M=7.65$, $SD=1.54$) indicating statistical significant difference $t(158)=93.54$, $P<.002$. The

dominance font ads with a statistically significantly than submissive typeface ads, which revealed the usefulness of treatment.

In the same way, we investigated if dominance font ads will cause more favourable event participation than submissive typeface (H3). The participants were randomly assigned into two groups (dominance and submissive). We utilized one-way ANOVA to examine how dominance advertisement affects event participation as the dependent variable. However, the Table 5. ANOVA result revealed a significant effect of dominance advertisement on event participation at $p < .05$ level, $F(1,158)=8749.24, p < .001$, which supports H3. Indicating that people exposed to dominance typeface elicited more favourable event participation than the submissive typeface.

Table 5. ANOVA Result for Dominance and Submissive Typeface on Event Participation.

Source	df	S.square	Means Squared	F.value	Sign val.(p)
Between Groups	1	42771.60	42771.60	8749.24	.000
Within Groups	158	772.40	4.89		
Total	159	43544.00			

Mediation analysis for dominance ads

To test if dominance leads to the higher motivation to event participation than displeasure typeface, proposed in H4³. We appraised a mediation analysis using the Process v2.15 macro in SPSS (Hayes, 2013; model 4). The dependent variable is event participation, and the predictor variable for the analysis is dominance typeface ads. At the same time, the mediator variable for the analysis was motivation.

Meanwhile, the path direct effect of dominance on motivation is positive and significant ($\beta = .4808, SE = .049, p = .001$), indicating that persons scoring higher on dominance are more likely to elicit favourable event participation. The direct effect of motivation on event participation is positive and significant ($\beta = .355, SE = .089, p = .001$), indicating that individuals scoring higher on motivation are more likely to elicit favourable event participation. Similarly, the indirect effect ($IE = .194$) is statistically significant: 95% $C.I. = (.049, .283)$. Indicating that motivation mediated the relationship between dominance and event participation H5.

5.3 Discussion

Experiment 3 results give information comparable to experiments 1&2 on the influence of dominant font advertisements on event attendance. Furthermore, motivation indirectly influences the link between dominance typeface advertisements and event participation. The dominance font ad prompted more favourable event attendance than the submissive advertising, extending previous research on the physical look of typefaces influence on viewers.

6. GENERAL DISCUSSION

The study's main objective is to examine the visual effects of object typeface through the cross-modal correspondence of typeface's physical appearance and participants' emotions. We investigated the physical appearance of the typeface and participants' emotions that influence corresponding sensory of event participation. The results of experiment 1 showed that the pleasure font ads (vs displeasure font) were rated more with pleasant, relaxed, satisfied, attractive, happy, and innovative. By contrast, displeasure font ad (vs pleasure font) was rated with unpleasant, bored, unsatisfied, unattractive, unhappy, and non-innovative. Experiment 2 revealed that the arousal font ad (vs unaroused) was rated more with stimulated, excited, frenzied, jittery, wide-awake, and aroused. As opposed, unaroused font ad (vs arousal) was rated with relaxed, calm, sluggish, dull sleepy, and unaroused. The experiment results revealed that the dominance font ad (vs submissive) was rated more with controlling, influential, free, important, captivating, and dominance. In contrast, the submissive font ad (vs dominance) was rated with uncontrolled, insignificant, guided, unimportant, disgusting, and submissive. These findings give converging evidence of an object typeface's automatic influence on event participation; this fact contradicts the Gestalt psychology scholars' claim that simple and harmonious designs are more popular compared to complicated and inharmonious designs (Niedenthal & Wood, 2019; Metwally, 2021; Ye et al., 2021).

The results of experiment 1 revealed that people exposed to pleasure ads elicited more favourable event participation than participants exposed to displeasure typeface did. This finding aligns with Wagner & Charinsarn (2021), Nedeljković et al. (2017), and Beier et al. (2017) showed that unique letters, distinct deviations from the general structure of lightness or skeleton, emphasising certain features, and swashed features had a more significant impact on readability

than reversed letter strokes or shading. The findings further revealed that the direct effect of pleasure font ad is not significant to motivation H4¹. Motivation had a positive and significant direct and indirect effect on event participation. Demonstrating that motivation mediated the relationship between pleasure typeface and event participation H5.

The experiment 2 findings showed that people exposed to arousal font ads led to more favourable event participation than the unaroused typeface ad. However, Ho (2020) averred that designers organise the foundations of typesetting to employ typography to explore new potential for interactivity and narrative. Meanwhile, the direct and indirect effects of motivation were statistically significant H4². Indicating that motivation mediated the relationship between arousal and event participation H5.

The findings of experiment 3 revealed that people exposed to dominance font ads led to more favourable event participation than the submissive typeface. As such, Poon (2021) findings showed that typographic design is an essential aspect of social communication today, and digital designers play a fundamental role to enable audiences to improve their economic and social participation and gain its full advantages. Additionally, a significant direct and indirect effect of dominance typeface on motivation and motivation to event participation H4³. Signifying that motivation mediated the relationship between dominance font ads and event participation H5.

6.1 Theoretical Implications

The experiments showed cross-modal interactions between the physical appearance of object fonts and participants' emotions. Participants elicited favourable event participation from the object typeface when examined across three emotional valences: Pleasure, arousal, and dominance. In any case, a well-functioning and visually appealing font is a major achievement. Therefore, Struppek (2014) mentions that people are always fascinated by novel and unique visual layouts.

The findings provide valuable information about the physical appearance of object fonts. The empirical demonstration and procedures of the study revealed that object typeface tends to facilitate a more favourable behaviour towards an event when affective cues that are pleasant, attractive, arousing, and dominance is used in an advertisement. Nedeljković et al. (2017) discovered that deviation from the universal structure in the typeface skeleton is a departure from a specific typeface property. Subjects rate the specific feature of typeface brightness as

exceptionally elegant, feminine, or loud, macho, frigid, and arrogant. Object fonts have dual processing modes, as fonts promote cognitive and emotional processing through vision and reading. This study applies HSM (Heuristic Systems Model) persuasion to examine the visual effects of object fonts on event participation. The heuristic system model explains how a person chooses and uses two processing modes to analyse the information in each given persuasive communication. Shi et al. (2021) averred that the heuristic pathway is a process in which people analyse a few informational cues, or even just one, and make illogical decisions based on restricted signals as visuals, colour, and forms.

The study's overall findings reveal how fonts can effectively lead to more favourable sports and event participation and contribute to the growing literature on font discourse. The most fundamental reason for countries, advertisers and companies to design typefaces is to create a sense of belonging and integration with consumers in a way that suits the brand message.

6.2 Practical Implications

The findings of the three experiments explicitly showed that the object typeface influences peoples' evaluation to attend an event. The event planners and advertisers could leverage the unique aspect of object typeface. Additionally, use objects fonts to effectively differentiate their products, events, and messages with a creative appeal, which create cross-modal communication towards arousing and dominating their audience's cognitive and affective processing of the event message to achieve liking and favourable attitude and creating belongingness with objects that are relatively similar to the company's symbols.

7. CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

The study investigated the visual effect of object typeface on event participation using three emotional valences: (pleasure and displeasure) and (arousal and unaroused), and (dominance and submissive). The pleasure (vs displeasure). The people exposed to pleasure ads elicited more favourable event participation than participants exposed to displeasure typeface did. The people exposed to arousal font ads led to more favourable event participation than the unaroused typeface ad. Additionally, people exposed to dominance font ads led to more favourable event participation than the submissive typeface. These findings provide more evidence on the physical

appearance of object typeface and participants' emotions, which further clarifies the interactivity between these elements when extra graphics are applied to a typeface.

We experienced some limitations because the concept of object fonts in the existing literature is limited, and the rigour in conducting three experiments is much. Moreover, the study had some setbacks in selecting an appropriate sample for the study. However, more research is needed in the purchase decision and attention capturing to determine if object typeface could increase purchases or increase consumers' attention to the brand. Therefore, future research should consider using tracking devices to investigate other concepts, such as purchasing decisions and attention, which will give a clear view of how consumers respond to object typeface.

Data Availability Statement

The authors will make the raw data supporting the results of this paper available to any competent researcher without restriction.

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Appendix

Table 1. Demographic of experiment 1, 2 and 3

Table 2. Mean standard deviation for experiment 1, 2 and 3

Table 1. Demographics Profile of experiment 1,2 and 3 Participants

	Frequency (n=480)	Percentage
Age:		
(19-25)	107	22.3
(26-30)	80	16.7
(31-35)	96	20
(36-40)	93	19.4
(41-46)	104	21.7
Gender:		
Male	254	52.9
Female	226	47.1
Marital Status:		
Married	163	34
Single	235	49
Divorced	62	12.9
Widowed	20	4.2
Exercise:		
Yes	464	96.7
No	16	3.3

Table 2. Means and Standard Deviations (in parentheses) for the Mediating and Dependent Variables for Motivation as a function of Event Participation.

Experiments		Motivation (n=80)		Event participation (n=80)	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1	Pleasure	23.35	(3.48)	28.00	(4.26)
	Displeasure	5.95	(.66)	7.00	(3.95)
2	Arousal	27.29	(5.21)	27.29	(5.21)
	Unaroused	5.55	(1.29)	6.10	(.44)
3	Dominance	23.650	(1.86)	29.00	(1.56)
	Submissive	5.650	(1.36)	6.10	(.44)

Note: Significant differences between conditions are denoted on the opposite variable below the column.

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