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Title: Stylistic Property in Landscape Photos: How Perceived Vertical Positions Influence Construal Level and Subsequent Destination Attitude and Visit Intention in Destination Advertising

by

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Abstract

Landscape photos are a common visual communication tool used by marketers to promote their products/services. Nevertheless, the impact of landscape photos on advertising effectiveness has not been fully explored. The present research investigates how the perceived vertical positions, as a prominent stylistic property of landscape photos, influences consumers' construal level and subsequent attitude and behavioural intention. A quantitative visual content analysis (Study 1) firstly validated that vertical position is the most prevalent stylistic property marketers use in landscape photos, compared with previously confounded visual angle and verticality. Through three experiments, drawn from the theory of mental simulation, construal level theory, and self-concept, this thesis revealed that advertisements using landscape photos featuring a high vertical position (vs. low vertical position) enhance consumers' construal level (Study 2), and this effect is partially mediated by consumers' decreased degree of inclusion of the depicted landscape in their self (Study3). Moreover, a quantitative textual content analysis in Study 1 revealed that landscape photos frequently appear in combination with spatial distance cues. Based on this foundation, Study 4 provided managers with applicable insights by adopting the framework of congruence in construal level to explain advertising effectiveness. In the context of destination advertising, landscape photos featuring a high (vs. low) vertical position enhance attitude towards and intention to visit a new destination when consumers have plans to visit a distant (vs. nearby) location (Study 4 (a)). In a similar vein, consumers also show enhanced attitude towards and intention to visit a nearby (vs. distant) destination when it is advertised using landscape photos featuring a low (vs. high) vertical position (Study 4 (b)).

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Declaration of Authorship

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I declare that this thesis and the work presented in it is my own and has been generated by me as the result of my own original research.

I confirm that:

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Abbreviations

Abbreviations of terms	
AMA	American Marketing Association
APA	American Psychological Association
BIF	Behavioural identification form
CL	Construal level
CLT	Construal level theory
ERGO	Ethics and Research Governance Online
IPA	Institute of Practitioners in Advertising
RQ	Research Question
SAM	Self-Assessment Manikin
VP	Vertical Position
VD	Visual Distance
WHO	World Health Organisation
WWF	World Wildlife Fund for Nature

Abbreviations of terms in data analysis	
α	Alpha
H	Hypothesis
IV	Independent Variable
DV	Dependent Variable
M	Mean
SD	Standard Division
ANOVA	Analysis of Variance
ANCOVA	Analysis of Covariance
MANOVA	Multivariate Analysis of Variance
MANCOVA	Multivariate Analysis of Covariance

Abbreviations of the name of journals	
AESP	Advances in Experimental Social Psychology
JA	Journal of Advertising
JBR	Journal of Business Research
JCP	Journal of Consumer Psychology
JCR	Journal of Consumer Research
JEP	Journal of Experimental Psychology
JM	Journal of Marketing
JMR	Journal of Marketing Research
JSR	Journal of Service Research
JTR	Journal of Travel Research

JPSP	Journal of Personality and Social Psychology
P&M	Psychology & Marketing
PSPB	Personality and Social Psychology Bulletin

Chapter 1: Introduction

Chapter Content

1.1 Chapter introduction

This chapter presents the research background of this thesis, which aims to address the underexplored advertising practice when landscape photos as visual materials. Specifically, this thesis focuses on one unique stylistic property of landscape photos —— vertical position —— and its influence on consumers' level of mental construal and their subsequent responses to advertisements. Drawn from the framework of congruence in construal level, this thesis investigates the changes of levels of mental construal induced by viewing landscape photos can affect consumers'

attitude and behavioural intention towards the product choice that is also represented at the same level of mental construal, thus leading to more effective advertising designs.

Three streams of literature on visual communication, construal level, and congruence effect uncover the potential impact of vertical position on consumers' construal level and subsequent evaluations of advertisements. This chapter also explains how this thesis positions itself in relevant literature.

This chapter then outlines three research objectives. And reported findings from one quantitative content analysis and four experimental studies that highlight contributions to theories, knowledge, and advertising practice. This chapter concludes with motivation for this research.

1.2 Research background

1.2.1 Images in advertising

Visuals are the cornerstone of effective advertisements. Ad spending in the advertising market is projected to reach US$1.088 trillion in 2024 and expand to US$1.307 trillion in 2028. Among all types of media, ads that incorporate visuals, such as print advertising (US$46.23 billion), digital banner advertising (US$174.40 billion), and TV & Video advertising (US$339.70 billion), are projected to reach US$560 billion in 2024, not to mention influencer advertising, search advertising, and direct messaging advertising, where visuals are impactful (Advertising – Worldwide, n.d.). Despite the billion-dollar spending on visuals in the advertising market, the compelling nature of static images and their moving form (i.e., videos) are widely acknowledged to grab attention (Allport, 1989), impact emotions (Peracchio & Meyers-Levy, 1994), enhance engagement (Scott, 1994), foster information retention (Cohen et al., 2009), and form brand image (Simonson & Schmitt, 1997). These qualities are fundamental to persuasive communication in advertising (Lavidge &

Steiner, 1961; Vakratsas & Ambler, 1999). However, images and videos are reflections of an innumerable reality or non-reality. The iconicity of visual images is not just a matter of content, but also the formal or stylistic features (Messaris, 1997).

The literature on visual communication highlights the stylistic features of visual images, not merely their manifest content. For example, adverts targeting certain feminine products might use backgrounds with soft contours and flowing curves, whereas adverts for products aimed at men might display angular or hard-edged shapes in the background. This apparent stylistic convention is based on a loose visual analogy between the physical body characteristics of men and women and a more abstract link between these shapes and traditional views of masculinity and femininity (Baker, 1961). Crucially, these stylistic features can convey meanings that extend beyond the more overt content or message of an ad. These features apply not just to a single static image, such as print ads, but also to a series of them, such as videos (Messaris, 1997). For instance, images or videos can be captured with a close-up focus or long-shot focus. This stylistic feature in isolation is believed to influence people's responses (Kim et al., 2019; Scott, 1994). However, videos may also incorporate additional stylistic elements, such as varying visual angles. Thus, videos, as a sequence of static images moving from one frame to the next, inherently offer a more dynamic and complex narrative and temporal progression, owing to the evolving stylistic features.

Therefore, consistent with the majority of research in visual communication (as detailed in Table 1), this thesis will concentrate on the specific impacts of certain stylistic features as opposed to the manifest content. Consequently, the use of static images over videos enables the isolation and examination of the cognitive and emotional responses that are elicited by a particular stylistic feature. Additionally, this approach facilitates a clear delineation of theoretical implications.

1.2.2 Landscape photos in advertising

Landscape photos are commonly used as a tool for visual communication in contemporary advertising. They often capture natural landscapes to highlight the origin of products (e.g., bottled water), or products that are associated with outdoor settings (e.g., shoes and cars) (Roose et al., 2019). They can also impart a sense of coherence within an expansive landscape (Jami, 2019). Landscape photos typically portray a variety of scenes, from natural vistas like forests and seacoasts to man-made cityscapes such as buildings, or a combination of both, like a cottage on an island, representing different spaces around the globe (Hartmann & Apaolaza-Ibáñez, 2012; Jami, 2019; Roose et al., 2019).

For instance, tourism advertisements on travel booking sites, such as Booking.com, often use landscape photos to depict destinations ((Figure 1 (a)). Also, landscape photos are also used by organisations like the World Health Organisation (WHO) to depict the worldwide impact of COVID-19 ((Figure 1 (b)), or by the World Wildlife Fund for Nature (WWF) to address environmental issues and protections ((Figure 1 (c)). Numerous brands use landscape photos to convey creative ideas. FIJI (mineral water), for instance, launched its first-ever $30 million TV advertising campaign showing multiple landscape photos of tranquil Fiji landscapes overlaid against polluted cityscapes (Figure 1 (d)). Similarly, Inikin (mineral water) collaborates with the Chinese National Geography to advertise their bottled water by showing a landscape photo of a volcanic crater (Figure 1 (m)). Under Armour (sportswear) uses a cityscape to advertise its concept of jogging (Figure 1 (e)), while Nike (sportswear) shows a jogger running through an endless landscape (Figure 1 (f)). Car manufacturers such as BMW (Figure 1 (g)) and Toyota (Figure 1 (h)) use landscape photos to show their cars cruising across landscapes. Other brands such as Apple (technology) (Figure 1 (i)), Breitling (luxury watches) (Figure 1 (j)), Lavazza (coffee) (Figure 1 (k)), Pegasus (airline) (Figure 1 (l)), and Disney cruise (experience)

(Figure 1 (n) and (o)) also use landscape photos as the advertising photos to promote their products and services (Also see Appendix A for more details). While the use of landscape photos in advertising is prevalent, there is no conclusive evidence on which landscape scenery is the most effective. The literature in visual communication suggests that adopting stylistic properties when producing advertising photos is a subtle way of influencing adverting effectiveness, which goes beyond different landscape sceneries.

(a) Booking.com

(f) Nike

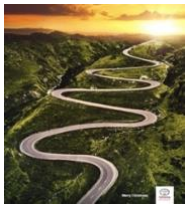
(k) Lavazza

(b) WHO

(g) BMW

(l) Pegasus

(c) WWF

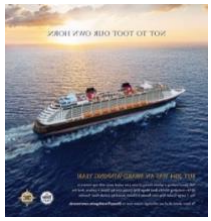


(h) TOYOTA

(m) Inikin

(d) FIJI

(i) Apple



(n) Disney

(e) Under Armour

(j) Breitling

(o) Disney

Figure 1: Examples of landscape photos in advertising

1.2.3 Vertical position as a stylistic property

1.2.3.1 Stylistic property

The literature on visual communication examines the role of stylistic properties in the persuasive power of visual rhetoric. Visual rhetoric involves the employment of visual elements, such as images, symbols, colours, and layout, to deliver a message persuasively (Scott, 1994; Messaris, 1996). Stylistic properties of advertising photos mimic real-life visual experiences, thereby shaping consumers' perceptions and interpretations in response to visual media (Peracchio & Meyers-Levy, 1994; Peracchio & Meyers-Levy, 2005; Scott, 1994). Stylistic properties encompass various factors that impact how visual content or materials (e.g., a product or a scene) is displayed in advertising photos (Peracchio & Meyers-Levy, 2005). As noted by Messaris (1997), advertising photos possess certain stylistic properties that bear an iconic relationship to our real-world visual experiences. As a result, these stylistic properties subtly influence consumers' cognitive and behavioural responses to advertisements, regardless of the diversity of the visual content.

In the realm of visual rhetoric in visual advertising, certain stylistic properties have been identified. For instance, upward-angle photos simulate people to look upward, compared with downward-angle photos, which then create feelings that the product is more luxurious because people are used to look upward at more powerful entities, such as their parents (van Rompay et al., 2012; Yang et al., 2010). Vertically

oriented objects convey strength and potency, while diagonally oriented objects convey dynamism as people's visual direction is diagonally rotated (Peracchio & Meyers-Levy, 2005; van Rompay et al., 2012). Other studies have investigated the impact of first-person versus third-person visual perspectives (e.g., Meyers-Levy and Peracchio (1996); Zhang and Yang (2015)) and close versus distant visual distance (e.g., Peracchio and Meyers-Levy (1994); Kim et al. (2019)). Their findings show that the manipulation of visual experiences using certain stylistic properties can influence consumers' cognitive and behavioural responses and subsequent evaluation of the advertisements.

1.2.3.2 Vertical positions in photos

- ***Vertical positions in photos***

From a photographic or design perspective, photos taken from high vertical positions are commonly referred to as "aerial photos" or "elevated photography." These photos are taken with the aid of flying objects (e.g., kites, balloons, etc.) that capture bird's-eye views of landscapes and surface objects (Merriam-Webster). The history of aerial photography dates to 1858 when Gaspar Felix Tournachon, captured the first aerial photograph of a French village from a hot-air balloon (PAPA, n.d.). Except for hot-air balloons, pioneers employed other methods such as kites, pigeons, and rockets to carry cameras into the sky. A notable example is George R. Lawrence's use of kites to document the aftermath of the 1906 San Francisco earthquake (USGS, n.d.). Also, aerial photography gained prominence during the First World War, replacing sketching and drawing for military reconnaissance (Northstar Gallery, n.d.). During the post-war period, aerial photography began to realise its commercial potentials.

- ***Application in contemporary advertising***

The evolution of aerial photography, from balloons to advanced digital technologies, has transformed it into an invaluable tool with diverse applications. Over recent decades, it has become apparent that aerial photographs have been widely adopted across advertising settings (Figure 2, middle and right columns). The presence of terrain, surface, or ground in these landscape photos offers visual references that enable consumers to envision themselves at varying vertical positions relative to the ground (high vs. low) (Jami, 2019). For instance, as illustrated in Figure 2, landscape photos taken from a very low place (e.g., Nike, Breitling, and Disney in the left column of Figure 2) create a feeling of being at a low vertical position. Others, taken from an elevated vantage point (e.g., FIJI, Inikin, Booking, Lavazza, Toyota, and Under Armour in the middle column of Figure 2), suggest a higher vertical standpoint. Furthermore, some are taken from an overhead perspective, looking straight down (e.g., BMW, Apple, and Pegasus in the right column of Figure 2). These photos seem to have the potential to evoke a sense of being at a high vertical position.

- ***Vertical position as a new stylistic property***

Following the notion of stylistic properties and their associations with visual experiences, the thesis argues that the contrast between high and low vertical positions in landscape photographs facilitates a form of visual communication that manipulates visual experiences. This manipulation subtly influences consumers' cognitive responses and subsequent appraisals of advertisements (Messaris, 1997; Scott, 1994). Nevertheless, the current understanding of the impact of vertical positioning remains ambiguous.

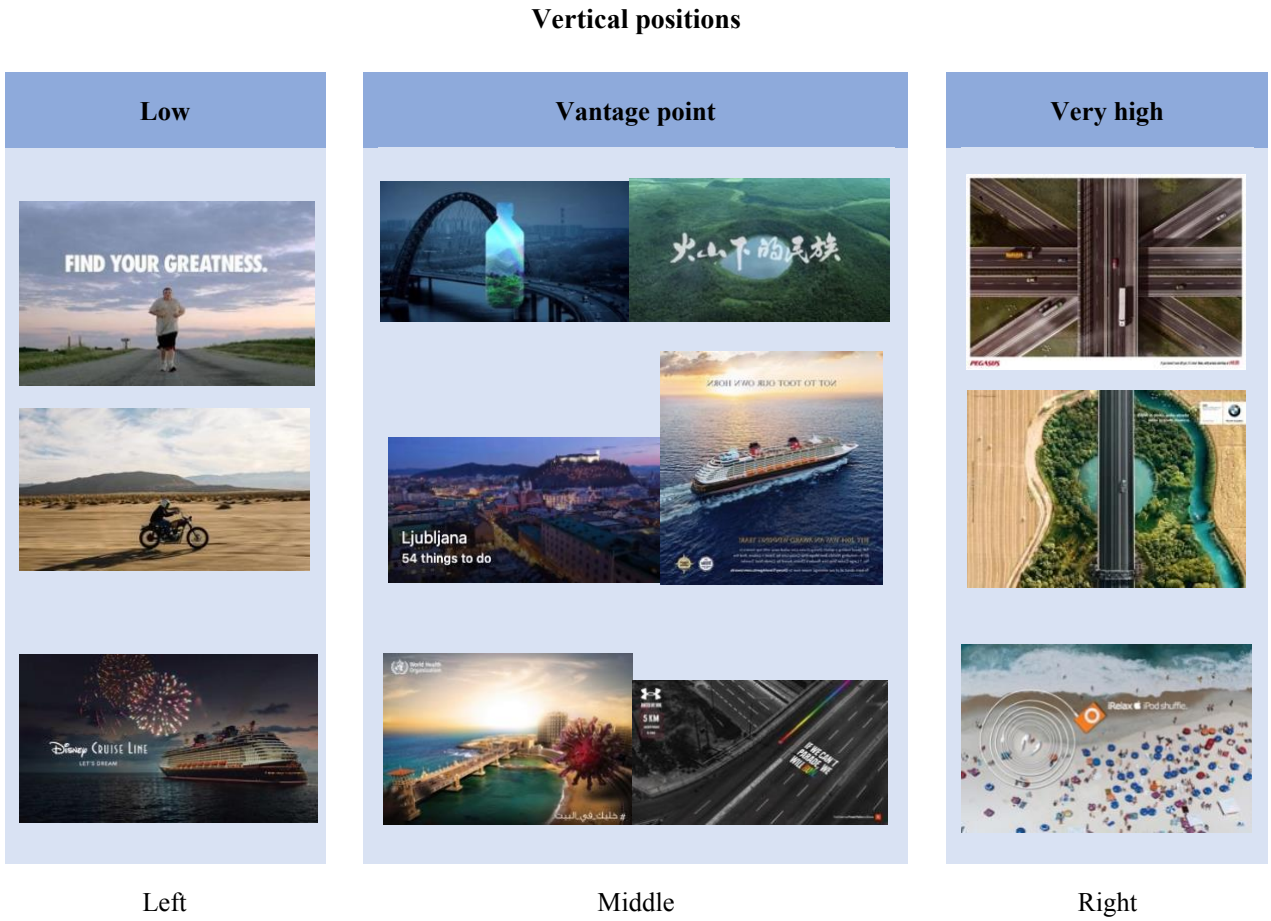


Figure 2: Landscape photos in ads categorised by vertical positions, depicting three relative vertical positions at low vertical position (left), high vertical position (middle), and very high vertical position (right)

The interpretations and impact of vertical position in advertising literature is currently a matter of debate and ambiguity (Table 1). Vertical position has been acknowledged solely within the conceptualisation of a dichotomous construct --- verticality --- which is the combination of visual angles and vertical positions (e.g., Aggarwal and Zhao (2015); Slepian et al. (2015); Jami (2019)). That is, high verticality is a high vertical position combined with a downward visual angle, whereas low verticality is a low vertical position combined with an upward visual angle. To elaborate, visual angle component necessitates verticality, visual angles is conceptualised as a dichotomous construct, featuring seemingly symmetric upward vs.

downward angles without considering any mathematical precision of divisions of degrees or magnitude of angular measurement. Literature on verticality believes that when visual angle is downward, photos must be taken from a high-elevated vertical position (e.g., birds-eye view of a village), featuring a high verticality, whereas when visual angle is upward, photos must be taken from a low-elevated vertical position (e.g., looking up from the mountain foot), featuring a low verticality. And it seems impossible to disentangle these two visual components (Aggarwal and Zhao 2015; Slepian et al. 2015; Jami (2019). Hence, verticality is always considered a dichotomous construct in the visual communication literature.

The dichotomous verticality is believed to influence consumers responses. For instance, product photos using a high (vs. low) verticality decreases (vs. increases) consumers' perceived power of the advertised product, and vice versa (Peracchio & Meyers-Levy, 1992; Yang et al., 2010). High (vs. low) verticality also increases (vs. decreases) the abstractness of consumers' information processing style (Aggarwal & Zhao, 2015; Slepian et al., 2015) and increases (vs. decreases) consumers' overall sense of control (Jami, 2019).

It might be argued that vertical position belongs to one of the components of verticality so that the same conclusion can be drawn from the verticality to explain whether high vs. low vertical position influences consumers' responses. However, recent research suggests that this assumption can be confounding and problematic. Orth et al. (2020) found that vertical position independently moderates the independent effect of visual angle on brand power evaluations, indicating that the vertical position alone may not impact the outcomes of interest. Additionally, Roose et al. (2019) showed that upward visual angle (vs. downward) independently increases consumers' abstract processing, contrary to the findings based on visual angles in verticality, that is, upward visual angle in low verticality (vs. downward visual angle in high verticality) decreases consumers' abstract processing (e.g., Aggarwal and Zhao (2015); Slepian et al. (2015)). Thus, it is unknown whether the vertical position

independently can influence consumers' responses without being conceptualised as a component of verticality.

This thesis defines "perceived vertical position" as the subjective feelings of being positioned at a *relatively higher vs. lower* point in space relative to the terrestrial surface depicted in landscape photos. The definition aims to exclude any confounding effects such as verticality. As stated by Arnheim (1957) and Gibson (2014), the complex human visual system can comprehend observer's point of observation (i.e., vertical position) via optical structure formulated by detection of surface, shapes of the object, light, shadows, object sizes, etc. Such perceptual principles also apply to landscape photos, which imitate how the objects are observed in our real-life. Therefore, the perceived vertical position in a landscape photo is a sense of being at a relatively lower or higher vertical position above the surface of the ground while always looking downward, without being confounded by visual angle and verticality.

However, it is still uncertain whether the vertical positions conceptualised in this thesis is a prevalent phenomenon or whether it impacts consumers' responses. Therefore, to investigate potential impact of perceived vertical position in landscape photos on consumers' responses and subsequent advertising effectiveness, this thesis is indented to firstly validate the proposed vertical position by answering the first research question:

- ***RQ1: Is vertical position conceptualised in this thesis a prevalent stylistic property used in advertisements, compared with visual angle and verticality?***

Table 1: Studies on stylistic properties			
Stylistic properties	**Study**	**Stylistic properties and consumers' responses**	**Main findings**
Orientation (vertical and non-vertical)	Peracchio and Meyers-Levy (2005) JCR	Vertical – power and potency Diagonal – dynamism	A congruence between vertical (vs. diagonal) presentation with potency claims (vs. dynamic claims) enhances attitudes towards the advertised product.
	van Rompay et al. (2012) P&M	Vertical – power and potency Horizontal – less power	Vertical (vs. horizontal) presentation increase price expectation via perceptions of product luxury when customers are high (vs. low) in sociable dominance.
Camera focus (zoom in and out) (cropped and non-cropped)	Peracchio and Meyers-Levy (1994) JCR	Cropped –high ambiguity Non-cropped – low ambiguity	Cropped photos enhance product evaluation if people are motivated to mentally complete image of the cropped object (to a complete object).
	Kim et al. (2019) JBR	Zoom in – Low CL Zoom out – High CL	A congruence between zoom-in camera lens (vs. zoom out) and rational appeal type (vs. emotional) increase advertising effectiveness.
Visual perspective (actor's and observer's)	Meyers-Levy and Peracchio (1996) JCR	Actor's – message elaboration (vs. Observer's)	A congruence between actor's perspective (vs. observer's) with third-person wording (e.g., "He's leaving work") (vs. second-person wording: "you are leaving work") increases product evaluations.
	Zhang and Yang (2015) JCP	Actor's – promotion focus	Promotion-focus customer (vs. prevention-focus) exhibit more favourable product evaluations when they are presented with the product photos taken from actor's perspective (vs. observer's).

		Observer's – prevention focus	
Verticality: **High verticality** (Downward visual angle confounded with high vertical position) **Low verticality** (Upward visual angle confounded with high vertical position)	Peracchio and Meyers-Levy (1992) JMR	Low verticality – powerful and dominant High verticality – subordinate and weak	Upward-angle photos generally increase product evaluations than eye-level angle photos and downward-angle photos. **Another confounding visual component vertical position was not mentioned**
	Yang et al. (2010) JCP	Low verticality – powerful and dominant High verticality – subordinate and weak	A congruence between upward-angle photos (vs. downward-angle) with customers ought self (vs. ideal self) increases product evaluations. **Another confounding visual component vertical position was not mentioned**
	van Rompay et al. (2012) P&M	Low verticality – powerful and luxurious	Upward-angle photos lead to powerful and luxurious evaluation. **Another confounding visual component vertical position was not mentioned.**

	Aggarwal and Zhao (2015) JMR	High verticality – high-level construal Low verticality – low-level construal	High vertical position leads to high-level construal and low vertical position leads to low-level construal. **Another confounding visual component visual angle was not mentioned.**
	Slepian et al. (2015) JPSP	High verticality – high-level construal Low verticality – low-level construal	High verticality leads to high-level construal and low verticality leads to low-level construal.
	Jami (2019) JMR	High verticality – high sense of control Low verticality – low sense of control	High vertical position increase sense of control and leads to willingness to take risks in unrelated tasks. **Another confounding visual component visual angle was not mentioned.** **Verticality has no effect on construal level**
Camera angle only (upward and downward)	Roose et al. (2019) JCP	Upward – high-level construal Downward – low-level construal	A congruence between upward-angle photos (vs. downward-angle photos) with distant future claims (vs. near future) increase advertising effectiveness.

Vertical position only (low and high)	**This thesis (2023)**	**High vertical position – High construal level** **Low vertical position - Low construal level**	**A congruence between vertical position & construal-representing factors increases advertising effectiveness.**

1.2.4 Congruence in construal level and advertising effectiveness

Advertising effectiveness can be enhanced through congruence effect, which arises when the design of an ad is aligned with people's cognitive system or when the elements within an ad are consistent with each other. To elaborate, advertisements are often operated within complex environments, in which consumer factors and multiple advertising elements may affect the persuasiveness of the ad (Peracchio & Meyers-Levy, 1994; Peracchio & Meyers-Levy, 2005). As a guideline, the congruence effect suggests that when the design of an ad is congruent with people's cognitive system (Hirsh et al., 2012; Osgood & Tannenbaum, 1955), or when the designs of elements within an ad are internally congruent (Fan et al., 2002; Stroop, 1935), the congruence effect occurs and enhances advertising effectiveness. Among various congruence scenarios, congruence in construal level appears to offer an overarching framework that explains most marketing and advertising situations.

Congruence in construal level is a specific type of congruence that provides an overarching framework for enhancing persuasion in marketing and advertising activities (Figure 3). Construal level refers to how individuals perceive, comprehend, and interpret an entity (e.g., advertisement), in an abstract (high-level) or a concrete (low-level) way, and it is positively influenced by four dimensions of psychological distance, including spatial, social, temporal, and hypothetical distance (Trope & Liberman, 2010; Trope & Liberman, 2012; Trope et al., 2007). The tenet of congruence in construal level notes that advertising effectiveness can be enhanced when construal-representing factors are congruent. In other words, consumers' construal level influences advertising effectiveness in a way of shifting consumers' preference towards subsequent product choices that are represented at the congruent/same level of construals. Or when advertising elements are represented at the congruent/same level of construal, the advertised product would be preferred by customers.

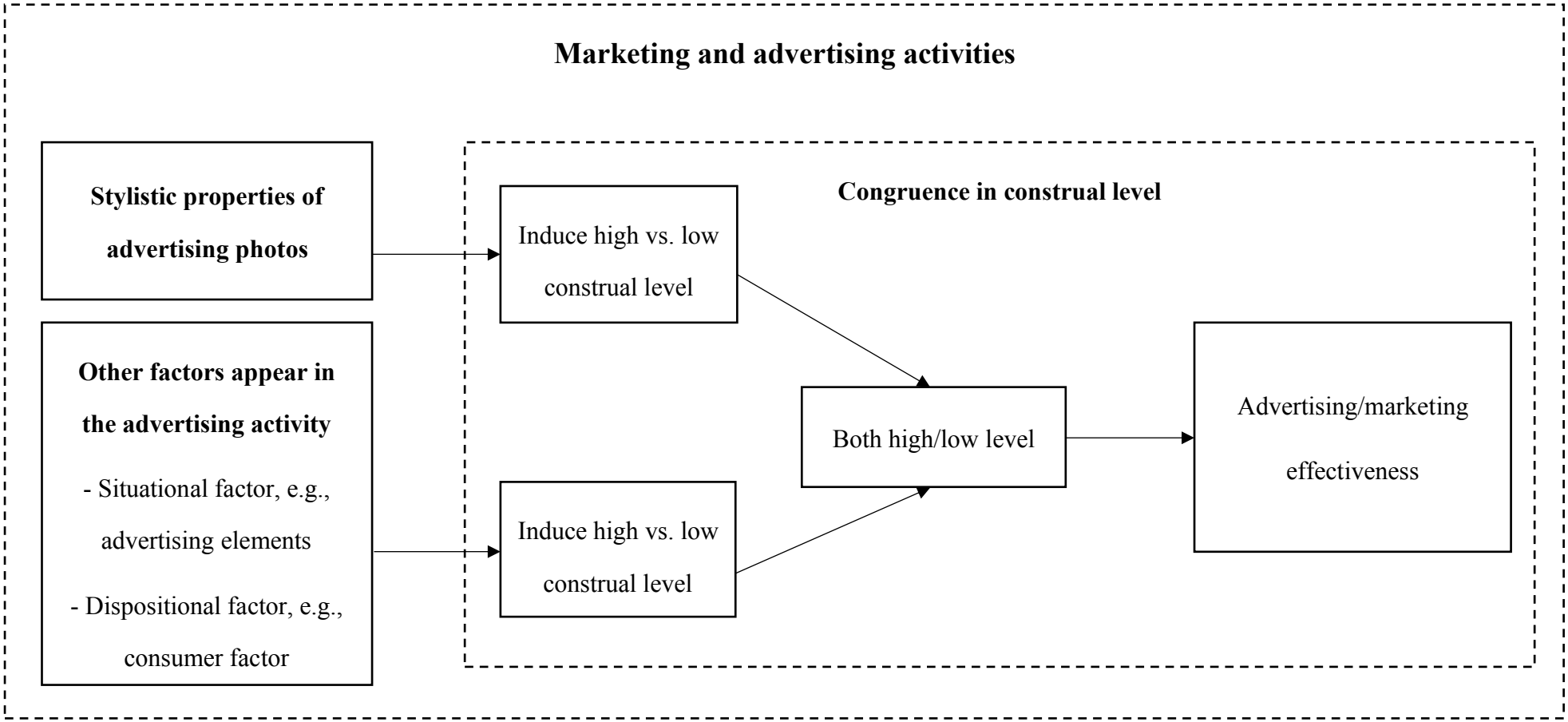


Figure 3: The framework of congruence in construal level in enhancing advertising/marketing effectiveness

This framework of congruence in construal level is believed to be a comprehensive approach that explain various marketing and advertising scenarios, as construal level encompasses many concepts and factors related to marketing and advertising (Table 2). These include, for instance, abstract or concrete thinking style (Ryoo et al., 2017; White et al., 2011), self-construal (independence is low-level vs. interdependence is high-level) (Spassova & Lee, 2013), regulatory-focus orientation (promotion focus is high-level vs. prevention focus is low level) (Lee et al., 2010), goal process style (success is high-level vs. failure is low-level) (Park & Hedgcock, 2016), and emotional appeals are high-level and rational appeals are low-level (Kim et al., 2019). Also, factors (e.g., consumers' mindset or advertising elements) that bear spatial distance cues (Chae et al., 2013; Ryoo et al., 2017), social distance cues (Kim et al., 2008; Zhao & Xie, 2011), and temporal distance cues (Chae et al., 2013; Roose et al., 2019; Spassova & Lee, 2013; Tangari & Smith, 2012) are also considered to represent high vs. low construal level. Therefore, it is important to exam whether vertical position in landscape photos can influence construal level, given its potential impact on consumers' responses to advertisements.

Among a plethora of advertising effectiveness proxies in existing literature, this thesis focuses on consumers' **overall attitude towards the product and behavioural intention regarding the product as proxies of effective advertising using landscape photos**. Consumers' attitudes and behavioural intention are routinely considered proxies of effective advertising. Attitude is characterised as an individuals' internal evaluation of an object such as a branded product (Mitchell & Olson, 1981). And attitude is based on beliefs about an object at a specific moment (Fishbein & Ajzen, 1977). Attitudes are considered as stable and enduring predispositions to act, which in turn determines a set of behavioural intentions related to the object. For example, a specific behavioural intention, such as purchase intention, is believed to predict a specific behaviour towards the object, such as actual purchase (Fishbein & Ajzen, 1977; Lavidge & Steiner, 1961; Mitchell & Olson, 1981). According to Eagly

and Chaiken (1993), behavioural intention signifies an individual's conscious plan to carry out a behaviour and is believed to lead to specific behaviours with respect to the object, such as actual purchase (Fishbein & Ajzen, 1977). The adoption of these two proxies aligns with the body of marketing and advertising literature as well as recognised industrial standards (e.g., AMA, (2018); Batra & Stayman (1990); Danaher et al. (2020); Deshpandé & Stayman (1994); Gotlieb and Sarel (1991); IPA (2021); Lavidge and Steiner (1961); Lucas and Britt (1963); Mehta (2000); Singh & Churchill (1987)).

Table 2: Empirical studies on congruence in construal level			
Studies (by year)	**Types of congruence**	**Factors representing construal level**	**Main findings**
Lee et al. (2010) JCR	Message-people	Regulatory focus X Abstractness	A congruence between regulatory focus and construal level increases brand attitude: promotion-focus individuals (vs. prevention-focus) construe information at a high level (vs. low level), a congruence effect occurs when match with abstract message (vs. concrete).
Tangari et al. (2010) JA	Message-people	Temporal distance X Temporal orientation	A congruence between distant (vs. close) temporal framed CSR message with future (vs. present) temporal orientation of customers increases attitude and purchase intentions.
White et al. (2011) JM	Message-people	Regulatory focus X Abstractness mindset	Loss-framed (vs. gain-framed) messages are most effective in influencing consumer efficacy and recycling when fit with a concrete (vs. abstract) mindset
Tangari and Smith (2012) P&M	Message-people	Temporal distance X Temporal orientation	A congruence between distant (vs. close) temporal framed message with future (vs. present) temporal orientation of customers increases attitude and purchase intentions.
Chae et al. (2013) JCR	Message-message	Spatial distance X Temporal distance	A congruence between distant (vs. close) spatial distance between elements in ads with long-term (vs. immediate) effects increase judgement on product effectiveness.
Jin and He (2013) JSR	Message-people	Temporal distance X Scope of the Guarantee	A congruence between full-satisfaction guarantee (vs. attribute-specific) and temporally distant consumer decision (vs. temporally close) increase guarantee persuasiveness

Spassova and Lee (2013) JCR	Message-people	Self-construal X Temporal distance	Independent (vs. interdependent) self-view is high-level (vs. low-level). Independent (vs. interdependent) fits future frame (vs. near future) increases advertisement effectiveness and product appeal.
Aggarwal and Zhao (2015) JMR	Message-message	Verticality X Desirability/feasibility	Perceived high verticality (vs. low verticality) increases importance of desirability (vs. feasibility) attributes of products.
Hernandez et al. (2015) JA	Message-people	Temporal distance X Product benefit	A congruence between a planned distant future purchase (vs. near future) with benefit-based appeals (vs. attribute appeals) increases message persuasiveness because benefit-based appeals (vs. attribute-based) are high-level (vs. low-level).
Kim et al. (2016) JTR	Message-people	Temporal distance X Abstractness	A planned distant-future/far-destination trip (near-future/close-destination) fits with abstract (vs. concrete) promotional messages increases attitude towards a hotel
Ryoo et al. (2017) JA	Message-people	Spatial distance X Mindset construal	Global norms message (vs. provincial norms) is more influential on consumers' attitude on and behavioural changes of sustainability when fit with consumers' high (vs. low) trait construal level.
Wang and Lehto (2019) JTR	Message-people	Spatial distance X Abstractness	A planned distant-future/far-destination trip (near-future/close-destination) fits with abstract (vs. concrete) promotional messages increases attitude towards the message and destination
Kim et al. (2019) JBR	Message-message	Spatial distance X Emotional/rational appeal	A congruence between zoom-out photos (vs. zoom-in) with emotional (vs. rational) appeals increases advertising effectiveness. Zoom-out photos (vs. zoom-in) and emotional (vs. rational) appeals are high-level (vs. low-level)

Roose et al. (2019) JCP	Message-message	Camera angle only X Temporal distance	A congruence between upward-angle photos (vs. downward-angle photos) with distant future claims (vs. near future) increase advertising effectiveness
Biliciler et al. (2021) JCR	Message-message	Temporal focus X Temporal distance	A congruence between past (vs. future) temporal focus and traditional product (vs. modern) increases advertising liking
The present research (2023)	**Message-message fit & Message-people fit**	**Vertical position X Spatial distance**	**A congruence between perceived vertical position and spatial distance increase advertising effectiveness**

1.2.4.1 Visual antecedents of construal level

The literature on visual antecedents or visual prime of construal level is a unique area of study in consumer research (Table 3), extending the literature on stylistic properties (Table 1). For instance, previous research has investigated that black-and-white photos induce consumers' past focus while colourful photos induce future focus, featuring low vs. high construal level via temporal distance dimension (Lee et al., 2014; Lee et al., 2017). The left vs. right product facing directions (Zhang et al., 2019) or positions (Chae & Hoegg, 2013) induce past vs. future focus too, featuring low vs. high construal level. In addition, low visual entropy (e.g., photos showing organised elements) leads to future focus (high-level) while high visual entropy (e.g., photos showing messy elements) leads to past focus (low-level) (Biliciler et al., 2021). Similarly, several studies have showed that vertical position seems to influence construal level.

The effect of vertical position on construal level has only been examined under the conceptualisation of verticality, and findings are inconsistent (Table 4). To elaborate, Slepian et al. (2015) and Aggarwal and Zhao (2015) showed that photos taken from a high position with a downward angle (i.e. high verticality), compare with photos taken from a low position with an upward angle (i.e. low verticality), induce high-level construal (i.e. abstractedness). However, Jami (2019) found that verticality has no effect on construal level when testing the same visual manipulation using landscape photos. More surprisingly, the independent effect of visual angle alone on construal level is contrary to the effect of visual angle based on the conceptualisation of verticality, that is, an upward visual angle perceived in photos (vs. downward visual angle) leads to high-level construal (vs. low-level construal) via overestimation (vs. underestimation) of visual distance (Roose et al., 2019; Van Kerckhove et al., 2015).

Table 3: Studies on visual antecedents of construal level					
Study	**Visual antecedents**	**Visual representations of the antecedents**	**Mechanism(s)**	**Theory**	**Finding on the effect on construal level (CL) or construal-representing factors (CL)**
Bar-Anan et al. (2007) JEP	Visual distance (close vs. distant)	A picture of a road with an arrow pointing to a section of the road far the observer (distant) A picture of a road with an arrow pointing to a section of the road close from the observer (close)	Visual distance	CLT	Close arrow – Low CL Distant arrow – High CL
Hansen and Wanke (2010) PSPB					
Kim et al. (2019) JBR		A close-up product photo (close) A product photo taken from long-shot (distant)		CLT	Close-up – Low CL Long-shot – High CL
Lee et al. (2014) JCR	Colour (black-and-white vs. colourful)	A black-and-white photo A colourful photo	Temporal focus	CLT	Black-and-white – High CL Colourful – Low CL
Lee et al. (2017) JCR					
Zhang et al. (2019) JA	Facing direction (left vs. right)	A left-facing product A right-facing product		CLT	Left-facing – Low CL Right-facing – High CL

Chae and Hoegg (2013) JCR	Positions (left vs. right)	A product on the left side of the photo A product on the right side of the photo		Hemispheric processing theory	Left position – Low CL Right position – High CL
Biliciler et al. (2021) JCR	Visual entropy (low vs. high)	A photo showing messy elements (high entropy) A photo showing organised elements (low entropy)		Principle of entropy increase	Low entropy – High CL High entropy – Low CL
Libby et al. (2009) JEP Libby and Eibach (2011) AESP Libby et al. (2011) JPSP	Visual perspective (actor's vs. observer's)	A photo taken from actor's perspective & A photo taken from observer's perspective	Spatial-social distance	CLT & Action identification theory	Actor's – Low CL Observer's – High CL
Slepian et al. (2015) JPSP	Verticality (high vertical position+downward visual angle vs. low vertival position + upward visual angle)	A downward-angle photographs taken from a high place & An upward-angle photographs from a low place	N/A	Theory of conceptual metaphor, grounded cognition	High verticality – high-level construal Low verticality – low-level construal
Aggarwal and Zhao (2015) JMR			N/A		
Jami (2019) JMR			N/A	Replication	High verticality– No effect Low verticality– No effect

Roose et al. (2019) JCP	Visual angle	An upward-angle photo with fixed vertical position & A downward-angle photo with fixed vertical position	Visual distance estimation	Theory of mental simulation, Embodied cognition theory	Upward angle – High CL Downward angle – Low CL
The present study (2023)	**Vertical position**	**A downward-angle photo taken from a high place & A downward-angle photo taken from a low place**	**Inclusion of in the self**	**Self-concept and Mental simulation**	**High vertical position – High CL Low vertical position - Low CL**

Table 4: Contradicting findings regarding the effects of visual angle, verticality, and vertical position on construal level					
Studies	**Visual antecedent**	**Visual components**	**Mechanism**	**Theory**	**Effect on construal level**
Slepian et al. (2015) JPSP	**Verticality:** Downward visual angle combined with high vertical position vs. Upward visual angle combined with low vertical position	Visual angle + Vertical position	N/A	Theory of conceptual metaphor and grounded cognition	High verticality – high-level construal Low verticality -level construal
Aggarwal and Zhao (2015) JMR			N/A		
Jami (2019) JMR			N/A	Replication of Aggarwal and Zhao (2015)	High verticality – no effect Low verticality – no effect
Van Kerckhove et al. (2015) JCR	**Visual angle:** upward vs. downward	Visual angle	Visual distance estimation	Theory of mental simulation and embodied cognition theory	Upward angle – high-level construal Downward angle – low-level construal
Roose et al. (2019) JCP					

The present study	**Vertical position:** high vs. low	**Vertical position**	**Inclusion in the self**	**Self-concept and theory of mental simulation**	**High vertical position – high-level construal** **Low vertical position – low-level construal**

In addition, none of the studies investigating potential effect of vertical position on construal level have provided a sound underlying mechanism (e.g., Aggarwal and Zhao (2015); Slepian et al. (2015); Jami (2019)), which is a concern echoed by Roose et al. (2019) and Van Kerckhove et al. (2015) that drawing inferences for the impact of either visual angle or vertical position from the confounded conceptualisation of verticality (i.e. combination of visual angle and vertical position) can be problematic. This thesis then intended to tackle this research gap by answering:

- ***RQ2: Does vertical position conceptualised in this thesis have an effect on construal level? &***

- ***RQ3: If vertical position influences construal level, what is the underlying mechanism?***

1.2.4.2 Congruence in construal level between landscape photos and construal-representing factors

Given the potential associations between vertical positions with construal level, congruence in construal level suggests that the presence of another construal-representing factor could play a role in determining advertising effectiveness. Empirical studies have adopted congruence in construal level to explain advertising/marketing effectiveness (Table 2). However, despite the discovery of various construal-representing factors and existence of congruence effect across advertising/marketing contexts, it remains unknown which construal-representing factors appear in combination with landscape photos in real-life advertisements, and no studies have examined whether vertical position and another construal-representing factor have a congruence effect on advertising effectiveness. This knowledge gap highlights the need to further research on how landscape photos influence attitude and behavioural intention of customers.

Therefore, this thesis focuses on the application of vertical position in landscape photos to examine advertising effectiveness by answering:

- ***RQ4: What is the most prevalent construal-representing factor accompanying landscape photos in advertisements? &***

- ***RQ5: Do vertical position with another construal-representing factor have a congruence effect on attitude and behavioural intention?***

1.3 Research purpose and objectives

The primary aim of this thesis is to investigate the impact of high vs. low vertical positions in landscape photos on consumers' cognitive responses and subsequent advertising effectiveness. Regarding advertising effectiveness, this thesis will take the theoretical lens of congruence in construal level and incorporate advertising reality to explain how vertical position influence advertising effectiveness. Several objectives lead the development of this thesis.

- ***Objective 1***

To identify the presence and significance of vertical position proposed in this thesis, and how it can be distinguished from visual angle and verticality in landscape photos. In the meantime, identify the most prevalent construal-representing factor (if any) in combination with landscape photos that are used in advertisements.

- ***Objective 2***

To examine whether high vs. low vertical positions proposed in this thesis is associated with consumers' construal level (i.e. abstract or concrete thinking styles), and what is the underlying mechanism that enables the associations.

This objective will be fulfilled by testing the effect of high vs. low vertical position on construal level and its underlying mechanism.

- ***Objective 3***

To examine whether the vertical positions with another construal-representing factor could enhance attitude and behavioural intention when construal levels are congruent.

This objective will be achieved by examining the congruence between vertical positions and another construal-representing factor identified from previous step. Then, determine if the congruence in construal level enhances advertising effectiveness.

1.4 Contributions

This thesis offers several important contributions to the literature on advertising, visual communication (specifically stylistic properties), the visual antecedents of construal level theory, and congruence within construal level. By employing a quantitative content analysis and conducting four experiments, this thesis advances the understanding of how landscape photos influence attitudes and behavioural intentions by emphasising vertical position as a stylistic property. Whereas previous research predominantly focused on the effects of various types of visual content in landscape photographs, this study broadens the scope of inquiry to examine how vertical position impacts consumer cognition and product decision-making.

1.4.1 Theoretical contributions

In terms of theoretical contributions, the thesis introduces a new typology of stylistic property, specifically the perceived vertical position, which is distinct from visual angle and verticality (Table 1). The thesis highlights that vertical position is a prevalent and independent construct in visual communication, challenging previous studies that conflated it with verticality and visual angles. The visual content analysis in Study 1 supports this distinction, revealing that consumers can distinguish perceived vertical position from visual angle and verticality, and it is the most prevalent stylistic property in every landscape photo. This contribution addresses a research gap as no prior studies have considered vertical position as an independent construct in visual communication. Previous research often conflates vertical positions with visual angle or verticality, limiting the comprehension of the impact of vertical

position on consumers' cognition and subsequent product decisions. By answering Research Question 1 and fulfilling Objective 1, the thesis responds to the call by Roose et al. to treat visual angle, vertical position, and verticality as independent constructs due to their different theoretical foundations and effects.

This thesis contributes to the construal level theory literature by suggesting that perceived vertical position acts as a visual antecedent influencing mental construal levels (Table 3). The literature review identified an existing gap regarding whether vertical position, as conceptualised in this thesis, can indeed affect construal levels. To address this gap, Study 2 and Study 3 demonstrated that a high (vs. low) vertical position in landscape photos leads to a relatively high (vs. low) level of mental construal among consumers. These experiments (Study 2 and Study 3) effectively manipulated perceived vertical position while controlling for potential visual confounds (visual angle, verticality), supporting the thesis's argument that vertical position is distinct from visual angle and verticality (Table 4).

Furthermore, the thesis proposes and tests a mechanism explaining how vertical position affects construal level. It posits that the degree of inclusion in the self is the underlying mechanism, suggesting that the feeling of being at a high versus low vertical position influences psychological distance through consumers' varying degree of inclusion of the landscape in the self. The findings indicate that an increase in perceived vertical position leads to a sense of detachment from the depicted environment, thereby reducing the degree of inclusion in the self-concept and, in turn, increasing construal level. In addressing the dimensions of psychological distance, the thesis argues that vertical position should be distinguished from spatial distance, emphasising the importance of considering the egocentric feature of psychological distance through the lens of self-concept.

Moreover, this thesis challenges existing theoretical propositions. First, the thesis disputes the notion that perceptual scope, specifically relating to visual distance, explains the effect of vertical position on construal level. It demonstrates that vertical

position influences construal level independently of perceived visual distance and perceptual scope, contradicting the claims of Aggarwal and Zhao (2015) and Jami (2019). Secondly, the thesis challenges metaphorical associations, commonly used to explain how vertical positions (when under the conceptualisation of verticality) influence construal level. The thesis argues that these associations may not come into play in the scenarios where vertical positions are not extreme, and the thesis questions the basis of metaphorical associations that focus on the observed object rather than the observer's positions.

1.4.2 Contribution to advertising practice

The thesis contributes to bridging a knowledge gap in the literature by employing the congruence in construal level framework to explain advertising effectiveness (Table 2). By identifying the most prevalent construal-representing factor associated with landscape photos and introducing new congruence scenarios, the research advances understanding within advertising literature.

The study identifies spatial distance cues as the most prominent construal-representing factors in combination with landscape photos in real-life advertising practices, particularly prevalent in tourism advertisements. Through a quantitative textual content analysis in Study 1, it determines that spatial distance cues are present with 95.2% of landscape photos in tourism advertisements. This finding not only fills a knowledge gap but also lays the groundwork for the empirical examination of advertising effectiveness.

The adoption of the congruence in construal level framework is substantiated aligning with previous advocates (e.g., Aggarwal and Zhao (2015); Biliciler et al. (2021); Roose et al. (2019); Spassova and Lee (2013)). Two experiments in Study 4 investigate how congruence in construal level between vertical position and spatial distance enhances advertising effectiveness. The thesis introduces new congruence scenarios by operationalising spatial distance cues into dispositional and situational

cues, contributing to empirical studies of congruence in construal level. In the context of destination advertising, congruence in construal level between vertical position and dispositional (Study 4 (a)) or situational (Study 4 (b)) spatial distance elicits a congruence effect, enhancing attitudes and intentions to visit the advertised destination. These findings validate the congruence effect assumptions and reinforce the theoretical underpinnings, indicating implicit associations between vertical position and spatial distance.

1.5 Motivation for this research

My research journey stemmed from personal interest, academic curiosity, and a desire to contribute to the conversation in the field of visual communication in advertising.

Photography has always captivated my imagination with its ability to frame a scene through a lens. Exploring various photographic styles, the magic lies in transforming ordinary scenes into narratives through compositions, lines, symmetry, shadow, angles, etc. Photography, to me, is not just a tool to capture moments; the way of capturing the moment seems to have a more profound meaning than the subject presented in the photos. Much like the iconic photographer Ansel Easton Adams, whose composition and use of dramatic perspectives transformed landscapes into timeless narratives. Portrait photographers like Annie Leibovitz showcase how unique perspectives can evoke powerful emotions and narratives. Surrealist Salvador Dalí mastered angles and proportions to give away dynamics and wonder. Tim Walker's fish-eye angles consistently introduce a sense of quirkiness. These photographic experiments with angles, perspectives, and compositions remind me of the profound impact these elements can have in conveying a story or emotion through the lens. It was also fascinating to witness how photographic techniques are strategically employed to persuade and captivate consumers in contemporary advertising. The deliberate use of unique angles and perspectives in advertisements

seems to have the power to draw viewers in, creating an emotional connection and conveying a brand message with impact.

My research interest developed while trying to understand how these photographic techniques work in advertising. Upon reading "Art and Visual Perception" by Arnheim (1957), I was fascinated by the author's creative insights and novel perspectives on scrutinising how artistic and photographic techniques are associated with human visual development. The foundational knowledge in the book has further established a broader academic discourse and inspired numerous top-tier publications. Decades of discussions emerge from Peracchio & Meyers-Levy (1992, 1994, 2005) to Roose et al. (2019), Slepian et al. (2015), and To & Patrick (2021), investigating the intricate details of how photographic techniques influence consumers' responses. However, I unexpectedly encountered controversies within the literature that posed challenges to my accurate understanding of how visual communication works. These controversies, which revolve around photographic techniques in advertising, have prompted me to critically examine differing angles and positions and consider how they might shape the dynamics of visual communication in the context of advertising.

Therefore, this thesis aims to navigate through these debates, and aim to contribute to a more comprehensive and nuanced understanding of the relationship between photographic techniques and consumer responses in the realm of advertising.

1.6 Chapter conclusion

This chapter set up the research background of this thesis that perceived vertical position in landscape photos could potentially influence consumers' construal level and following product choices, attempting to contribute to the knowledge and theoretical gaps in the literature and advertising practice.

Following a summary of the relevant literature, this chapter addressed the significance, prevalence, and yet unknow effect of perceived vertical position in landscape photos on consumers' responses. This chapter then addressed the adoption of the framework of congruence in construal level to explain advertising effectiveness.

This chapter presented three objectives that set the research agenda to answer the research questions. Following the three objectives, this thesis will review previous studies that concern the application of landscape photos in advertising practice. Then the literature review will bring in visual communications in advertising/marketing research and navigate applications of stylistic properties. The literature review will extensively discuss congruence in construal level with the emphasis on extant construal-representing factors and congruence scenarios. The literature review will further validate the research and knowledge gaps in each of these streams of literature as well as research questions outlined in this thesis.

Chapter 2: Literature Review

Chapter Content

2.1 Chapter introduction

This chapter presents critical literature review, attempting to explain how landscape photos used in ads influence advertising effectiveness.

Section 2.2 defines the concept of landscape photos and identifies synonyms used in advertising/marketing literature. This section also reviews existing studies on the effect of visual content on advertising effectiveness, focusing on whether man-made or natural landscape sceneries enhances advertising effectiveness. Beyond the countless scenes depicted in photos, this section shifts the focus to the literature on stylistic property, suggesting that the way visual materials are displayed in photos can provide a more generic explanation of advertising effectiveness.

Section 2.3 reviews the literature on stylistic properties in advertising and marketing research. This section explores the ways that visual materials (e.g., a product or a scene) are displayed in photos simulate certain visual experiences that subsequently affect consumers' cognitive and behavioural responses. This section proposes that vertical position is a prevalent yet overlooked stylistic property of landscape and intends to establish it as a new stylistic property by investigating its impact on advertising effectiveness.

Section 2.4 explains rationales for adopting congruence in construal level as the framework to explain advertising effectiveness. In this section, congruence effect in construal level is addressed and the congruence in construal level guides the development of this thesis. Specifically, this framework suggests that advertising effectiveness can be enhanced when the construal level of the message in an advertisement is congruent with the construal level of either a consumer factor or another advertising element. As such, this chapter then includes:

- Factors that can be represented at high vs. low construal level.

- Evidence of potential congruence effect between construal-representing factors on advertising effectiveness.

And in Section 2.5, congruence in construal level suggests reviewing literature on visual antecedents of construal level to identify the potential associations between vertical position and construal level.

Section 2.6 concludes literature review by addressing the research gaps identified in the existing literature and proposes research questions contributing to the research gaps.

2.2 Landscape photos in advertising

Landscape photos are images that capture natural landscapes (e.g., forest, seacoasts, etc.), man-made cityscapes (e.g., buildings), or a blend of both (e.g., a cottage on an island) (Caputo, 2007). Academic narratives use multiple synonyms for landscape photos, including "images of landscape sceneries" that capture mountains and forest, "panoramic pictures" that capture mountains, lakes, glaciers, etc., and simply "landscape photos" that capture cityscapes, rocky deserts, and other landscape sceneries (Hartmann & Apaolaza-Ibáñez, 2012; Jami, 2019; Roose et al., 2019). The idea of landscape photos is to show the countless spaces within the world (hereafter: landscape photos).

A handful of studies have addressed the relationship between advertising effectiveness and the visual contents of landscape photos. For instance, from an evolutionary perspective, research suggests that landscape photos depicting natural sceneries like natural landscapes or vegetation trigger more positive psychophysiological and emotional responses, compared with man-made sceneries (Cackowski & Nasar, 2003; Falk & Balling, 2010; Hartmann & Apaolaza-Ibáñez, 2010, 2012) because humans have an innate preference for the natural and outdoor environment (Kaplan, 1987). In a similar vein, subsequent studies have found that

landscape photos depicting natural landscapes are more effective in enhancing advertising effectiveness, especially when the advertised product/service is associated with nature, such as green energy brands and green advertising (Hartmann & Apaolaza-Ibáñez, 2010, 2012). Despite the effect of different types of landscape sceneries, in real-life advertising practice, landscape sceneries also capture man-made objects such as building and roads (e.g., Nike, Under Armour, Pegasus, and BMW). Landscape photos have also been applied in a variety of sectors that are seemingly irrelevant to "green" or "nature" (e.g., airlines, technology, and sports). It is thought provoking that how landscape photos can enhance advertising effectiveness that go beyond different types of visual content and product/service attributes.

Therefore, this thesis is intended to provide a more generic understanding of advertising effectiveness using landscape photos by incorporating the notion of stylistic properties. That is, the ways that the scenery is presented in landscape photos will influence consumers' responses that go beyond the countless types of sceneries presented.

2.3 Stylistic properties in visual communication

Visual communication in consumer research emphasises the role of visual rhetoric in persuasion. Visual rhetoric refers to the use of visual elements, such as images, symbols, colours, and layout, to convey a message persuasively (Scott, 1994; Messaris, 1996). It involves the strategic arrangement and manipulation of visual components to influence an audience's perception, understanding, and response to a particular argument or idea. In essence, it encompasses various techniques such as symbolism, juxtaposition, framing, and colour theory to communicate ideas effectively and evoke specific emotions or reactions from viewers. In the realm of visual rhetoric, actionable strategies such as stylistic properties lie in its role in shaping perception, interpretation, and communication with visual media.

Stylistic properties refer to a variety of factors that impact how materials (e.g., a product or a scene) are visually displayed in advertising photos that influence consumers' decision making (Table 1). Stylistic properties are production elements, such as camera angles, cropping, or orientations, that affect how objects are displayed in a photo (Peracchio & Meyers-Levy, 2005). Messaris (1997) noted that stylistic properties bear an iconic relationship to our real-world visual experiences. This means that individuals' visual processing requires the retrieval of learned pictorial schemata in order to interpret the visual scenes. For instance, the pictorial schemas in relation to upward-angle photos remind customers of their learned experience of looking up at powerful entities (e.g., adults) in early childhood. Thus, upward-angle product photos (vs. downward-angle) normally increase power perceptions of the product (Peracchio & Meyers-Levy, 1992; Wang & Peracchio, 2014). In advertising literature, stylistic properties can be used as a relatively more subtle or indirect way of suggesting certain meanings and evoking viewers' reactions to advertising photos (Messaris, 1997; Scott, 1994).

In the advertising literature on conventional product photos, stylistic properties normally include orientations, camera angles (upward and downward), cropping (a close-up camera vs. a distant camera), and camera perspectives (actor's and observer's), which simulate audiences' visual experiences that subsequently influence their cognitive and behavioural responses to advertisements.

2.3.1 Stylistic properties of conventional product photos

2.3.1.1 Orientations

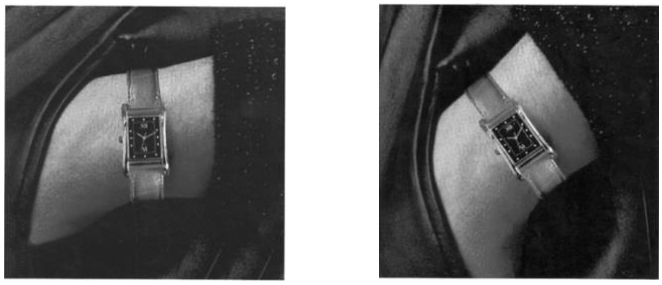
Orientation refers to the way an object is presented in a photo, whether vertical, horizontal, or diagonal. In advertising photos, vertical orientation of the object (vs. non-vertical) conveys power and potency. According to Peracchio and Meyers-Levy (2005), consumers interpret visual images through a learned system of pictorial

conventions. For instance, objects that are vertically oriented, such as stalwart skyscrapers or sturdy trees, signal strength and potency. As a result, photos that display a vertically oriented object (e.g., watch) also convey strength and potency of that object (Figure 4) (Peracchio & Meyers-Levy, 2005).

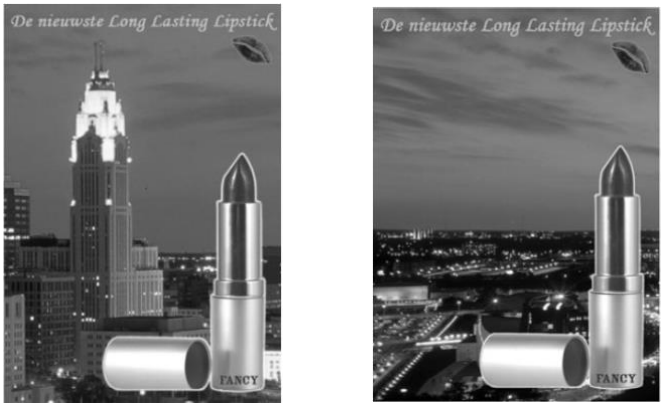
Peracchio and Meyers-Levy (2005) further found that a photo of a vertically oriented watch paired with a high potency slogan (e.g., "Successful, Confident, and Admired. A Powerful Statement of Who You Are") increases brand evaluations. Similarly, a photo of a diagonally oriented watch paired with a dynamic slogan (e.g., "Spirited, Spontaneous, and Expressive. A Provocative Statement of Who You Are") also increases brand evaluations. In a similar vein, a vertically oriented background (i.e. skyscraper), as opposed to a horizontal background, can lead to higher price expectations for the advertised product (i.e. lipstick) because customers associate vertical orientation with luxury and high potency (Figure 4) (van Rompay et al., 2012).

Orientations

Vertical | Non-vertical



Peracchio and Meyers-Levy (2005)



van Rompay et al. (2012)

Figure 4: Orientations as stylistic property

2.3.1.2 Cropping and visual distances

Cropped product photos depict a zoom-in focus/close-up camera distance, while non-cropped product photos depict a zoom-out focus/distant camera distance (Figure 5). Thus, cropped product photos lead to a close-up visual tendency as they are usually taken with a close camera focus or distance (Kim et al., 2019; Scott, 1994). And the close visual distance in cropped photos (of a watch) triggers customers to focus more on product details, compared with distant visual distance in non-cropped photos (Figure 5) (Kim et al., 2019). Kim et al. (2019) further argue that advertising effectiveness can be enhanced by pairing either emotional appeals (e.g., “Become the foremost global leader with this laptop”) with non-cropped photos; or pairing rational appeals (e.g., “Revolutionary weight, breaking the rule with 1 kg's laptop”) with cropped photos. This is because rational appeals emphasise physical features, details,

and characteristics of a product, while emotional appeals emphasise satisfaction gained from ownership. In addition, cropped photos are ambiguous, and people tend to mentally complete the missing parts of cropped photos. This mental completion of cropped product photos leads to positive emotions which in turn enhance subsequent product evaluations (Peracchio & Meyers-Levy, 1994).

Cropping and visual distance

Cropped/close | Non-cropped/distant

Kim et al. (2019)

Illustrated by the author

Figure 5: Cropping and visual distance as stylistic property

2.3.1.3 Visual perspectives

Visual perspectives refer to the way the viewer is positioned in relation to the object that result in two types of action imagery: actor's and observer's perspectives. Visual perspectives include two visual perspectives: a first-person/actor's or a third-person/observer's perspective, which impact consumer-product interactions (Figure 6). To elaborate, an actor's perspective (e.g., a photo of a hand holding a mug from the first-person perspective) encourages consumers to engage with the events as if they are exercising the actions in the events. While an observer's perspective (e.g., a photo of a man holding a mug from a third-person perspective) encourages consumers to

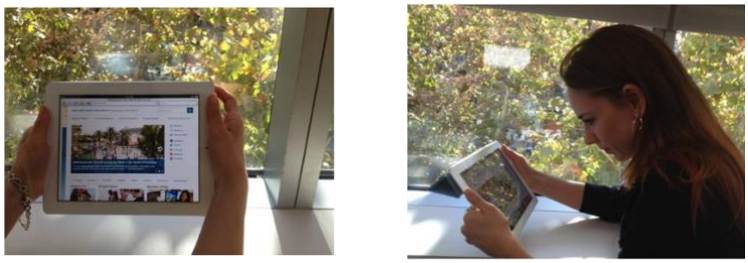
scrutinize themselves from an observer's perspective (e.g., what do other people think of me?) (Libby et al., 2009; Libby & Eibach, 2011; Zhang & Yang, 2015).

Visual perspectives then take effect on influencing advertising effectiveness through changing consumers' processing styles. For instance, Meyers-Levy and Peracchio (1996) show that product photos in car insurance advertisements taken from an actor's perspective (Figure 6), as opposed to an observer's perspective, led to increased elaborations of the ad message. Subsequently, product photos taken from an actor's perspective (vs. observer's) combined with third-person wording (e.g., "He's leaving work") (vs. second-person wording: "You are leaving work") resulted in higher product evaluations (Meyers-Levy & Peracchio, 1996). Zhang and Yang (2015) note that an actor's perspective, compared with an observer's perspective, allows consumers to immerse themselves in the experience and draws their attention to the situations depicted in the photos, representing internally driven and hedonic feelings (Figure 6). Thus, customers exposed to the product photos (i.e. railway service and online class) taken from an actor's perceptive orient more towards their promotion focus. In contrast, photos depicting the observer's perspective increase reliance on externally-triggered, other-oriented inferences, which leads to a more prevention-focused orientation.

Visual perspectives

Actor's | Observer's

Meyers-Levy and Peracchio (1996)



Zhang and Yang (2015)

Figure 6: Visual pespectives as stylistic property

2.3.1.4 Camara angle and visual angle

Camera angle, also known as visual angle, is a dichotomous construct that refers to either upward or downward cameral/visual angle. The use of upward and downward camera angles/visual angles is well documented in advertising literature regarding stylistic properties (e.g., Peracchio and Meyers-Levy (1992); Yang et al. (2010); van Rompay et al. (2012)) (Figure 7). In particular, product photos that are taken with an upward visual angle signal potency and power of the product because the pictorial processing of upward-angle photos reminds customers of their learned experience, such as looking up at powerful entities (e.g., looking at parents) (Peracchio & Meyers-Levy, 1992; van Rompay et al., 2012; Wang & Peracchio, 2014).

It is noteworthy that the visual angle in existing empirical studies is conceptualised as a dichotomous construct, featuring seemingly symmetric upward versus downward angles. To elaborate, unlike the conventional understanding of visual angle in its mathematical form, the visual angle should have a degree in angular

measurement, such as 10 degrees, 30 degrees, or 90 degrees, which quantifies the size or magnitude of an angle. However, the visual angles conceptualised in existing studies do not feature divisions of degrees and varied magnitudes of radians, nor do they possess such mathematical precision. They are purely considered two seemingly symmetric upward angles and downward angles, without specifying the degrees by which they differ. Hence, further discussions regarding the impact of visual angle are all based on this dichotomous construct.

Previous studies showed that the impact of visual angle on advertising effectiveness depends on consumers' motivations. For instance, Peracchio and Meyers-Levy (1992) (Figure 7) shows that when customers' processing motivation is low, product (i.e. bike) evaluations are most favourable when the viewers are looking up at the product (i.e. photo taken with an upward angle), least favourable when looking down at the product (i.e. photo taken with a downward angle), and moderate when the product is at eye level (i.e. photo taken with an eye-level/flat angle). When customers' processing motivation is moderate, eye-level photos produce the most favourable evaluations. When customers' processing motivation is high, the camera angle effect diminishes (Peracchio & Meyers-Levy, 1992). In a similar vein, van Rompay et al. (2012) (Figure 7) show that upward-angle photos, as opposed to downward-angle photos, trigger perceptions of a product (i.e. cereal) as more powerful and luxurious. Additionally, Yang et al. (2010) found the similar results that upward-angle photos of a product (e.g., cereal) result in evaluations of the product as powerful and dominant, while downward-angle photos result in evaluations of the product as subordinate and weak. Meanwhile, the advertising effectiveness is enhanced by either matching up upward-angle photos with customers' ought self (motivated by duties and obligations) or matching downward-angle photos with customers' ideal self (motivated by hopes and aspirations).

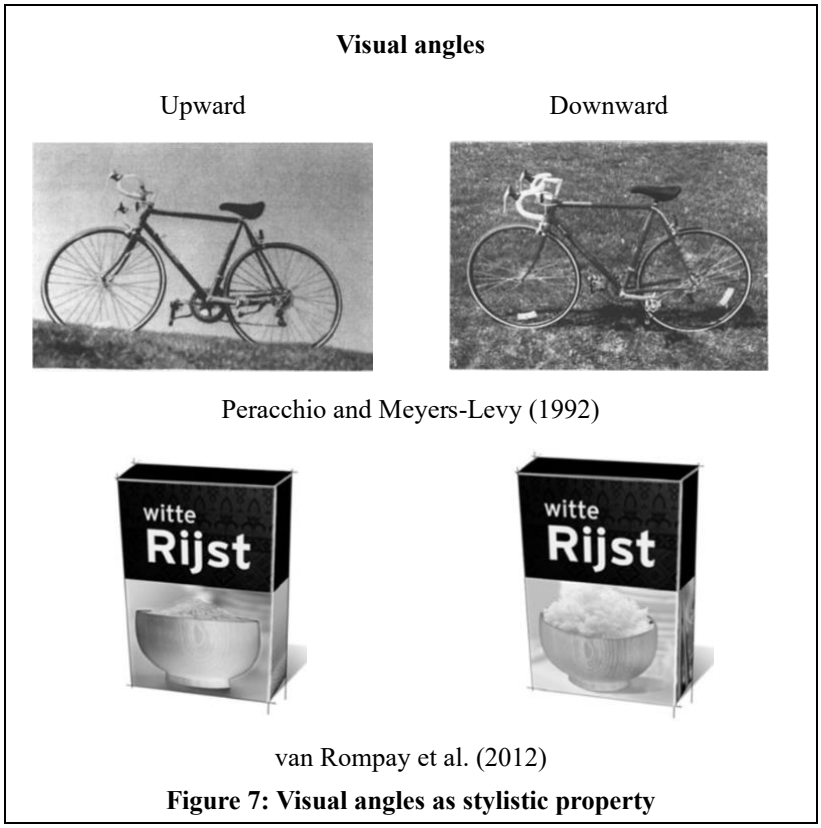


Figure 7: Visual angles as stylistic property

The previously mentioned studies examined the impact of stylistic property of product photos. A few studies have attempted to apply the notion of stylistic properties to understand how landscape photos influence consumers' cognitive and behavioural responses, as landscape photos can serve as either the product/service or the advertising background. However, unlike conventional product photos, landscape photos seem to have their own unique stylistic properties due to the presence of ground/surface in landscape photos.

2.3.2 Stylistic properties of landscape photos

Like product photos, landscape sceneries can also serve as visual materials in photos, and the way they are displayed can bear certain stylistic properties. However, the application of stylistic properties differs between landscape photos and conventional product photos. Conventional product photos have more flexibility in terms of utilising different camera angles, positions, and movements of as they are usually taking in a controlled studio settings. However, landscape photos used in real-

life advertisements have limited applications of visual perspectives and orientations because they are less focused on consumer-product interactions (e.g., a consumer holding an iPad) (Figure 6). However, landscape photos could still induce close or distant visual distances, and may feature upward and downward visual angles (Roose et al., 2019). Additionally, the presence of ground/surface in landscape photos introduces a new, previously overlooked stylistic property — perceived vertical position.

2.3.2.1 Visual distances

Visual distances, like cropping, are a constant stylistic property of both product and landscape photos, and can impact consumers' evaluations of the product (e.g., Peracchio and Meyers-Levy (1994); Kim et al. (2019)). The visual distance between the viewer and the target sceneries is normally determined by taking photos from a close or distance location (Figure 8) (Bar-Anan et al., 2006; Hansen & Wanke, 2010; Kim et al., 2019; Marzocchi et al., 2016).

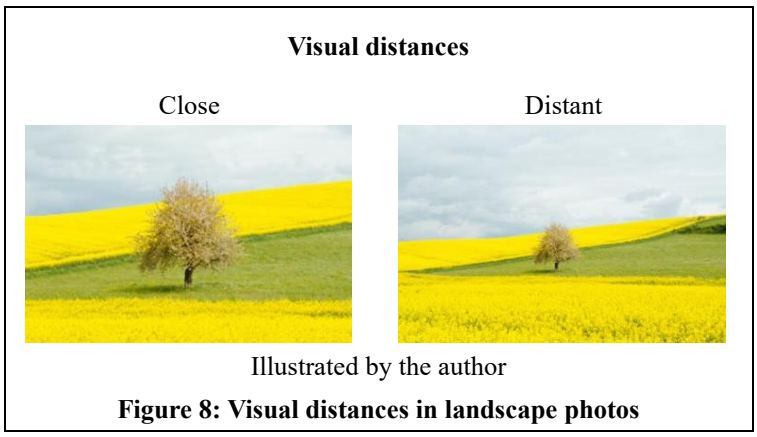


Figure 8: Visual distances in landscape photos

2.3.2.2 Visual angles

Landscape photos can also feature an upward or downward visual angle by altering the position of the sky-land horizon. Like visual angle in product photos, it is a dichotomous construct that refers to the use of either upward or downward visual angle. According to Roose et al. (2019), a landscape photo with a sky-land horizon

below the bottom 1/3 of the photo (vs. a sky-land horizon above the top 1/3 of the photo), elicits the perception of viewing the landscape sceneries with an upward visual angle (vs. a downward visual angle) (Figure 9). This means that customers may perceive looking up at the sky or mountains, or looking down on the surface of the lake or ground.

Roose et al. (2019) shows that visual angles alone in landscape photos influence consumers' processing style towards advertising information. Specifically, upward-angle photos prompt a more abstract processing style, while downward-angle photos lead to a more concrete processing style. As a result, when an upward-angle photo of a panoramic scene (e.g., of glaciers) is paired with a future-framed message for a bottle of water (e.g., "Live the future"), or a downward-angle photo is paired with a near future-framed message (e.g., "Live now"), consumers exbibit higher product evaluations (Figure 9). The findings also extend the power and potency perceptions evoked by upward visual angle found in Peracchio and Meyers-Levy (1992), van Rompay et al. (2012), and Yang et al. (2010).

Visual angles

Upward | Downward

Roose et al. (2019)

Figure 9: Visual angles in landscape photos

Visual distance and visual angle in landscape photos resemble stylistic properties appear in conventional product photos as they are thought to elicit similar visual experiences. However, landscape photos differ from conventional product photos in

terms of the consistent presence of the terrain/ground/land/surface, which may not be present in conventional product photos. And the presence of them provides visual references for consumers to perceive a unique visual experience —— perceived vertical positions.

2.3.2.3 Vertical position in verticality

Studies have conceptualised high vs. low perceived vertical position as part of verticality. Verticality is a dichotomous construct, with high verticality combining a high vertical position with a downward visual angle, and low verticality combining a low vertical position with an upward visual angle. As illustrated in Figure 7 and 9, the upward-angle photos of the bicycle, cereal, and trees are taken below the product/scene while downward-angle photos are taken above the product/scene, featuring low vs. high verticality, respectively. Hence, high (vs. low) verticality can be used to evoke both perceived high (vs. low) vertical position (e.g., Aggarwal and Zhao (2015); Jami (2019); Slepian et al. (2015)) and perceived downward (vs. upward) visual angle (e.g., Peracchio and Meyers-Levy (1992); van Rompay et al. (2012); Yang et al. (2010)).

Vertical positions (in verticality)

Low vertical position

High vertical position

Jami (2019)

Figure 10: Vertical positions in landscape photos as conceptrulised in verticality

In line with the conceptualisation of verticality, the high vs. low vertical position component that exists in landscape photos also seems to influence consumers' responses. As shown in Figure 10, consumers perceived changes in their relatively

low vs. high vertical positions when adopting upward visual angle vs. downward visual angle in the context of landscape photos (Jami, 2019; Slepian et al., 2015). Jami (2019) found that high vertical position component, compared with low vertical position component perceived from landscape photos, increases customers' overall sense of control (i.e. customers presume that their action will have a positive outcome even if the situation is completely determined by chance) and make them more willing to take risks in tasks such as purchasing new product, car insurance, and gambling games. However, the exiting conceptualisation of vertical position within verticality is still a confounded construct in visual communication, combining both high vs. low vertical position with downward vs. upward visual angle. This thesis aims to investigate a new typology of vertical position that is independent from verticality.

2.3.3 New typology of vertical position in landscape photos

This thesis proposes a new typology of vertical positions that commonly appear in advertisements using landscape photos, independent from visual angle or verticality. Landscape photos can induce high vs. low vertical positions without being confounded with an upward visual angle, making vertical position an independent construct from verticality. As shown in Figure 11, some landscape photos are taken from a very low viewpoint (e.g., Nike, Breitling, Disney, and WWF in the left column of Figure 11). Some are taken from a higher vantage point (e.g., FIJI, Anakin, Booking, Lavazza, Toyota, Under Armour, Disney, and WHO in the middle column of Figure 11). And some are taken from an even higher viewpoint, looking straight down from overhead (e.g., BMW, Apple, and Pegasus in the right column of Figure 11). And these landscape photos do not seem to feature an upward visual angle, indicating an independence from verticality. Hence, this thesis proposes that the visual representations of these landscape photos could elicit varied perceived vertical positions that potentially influence consumers' cognitive responses.

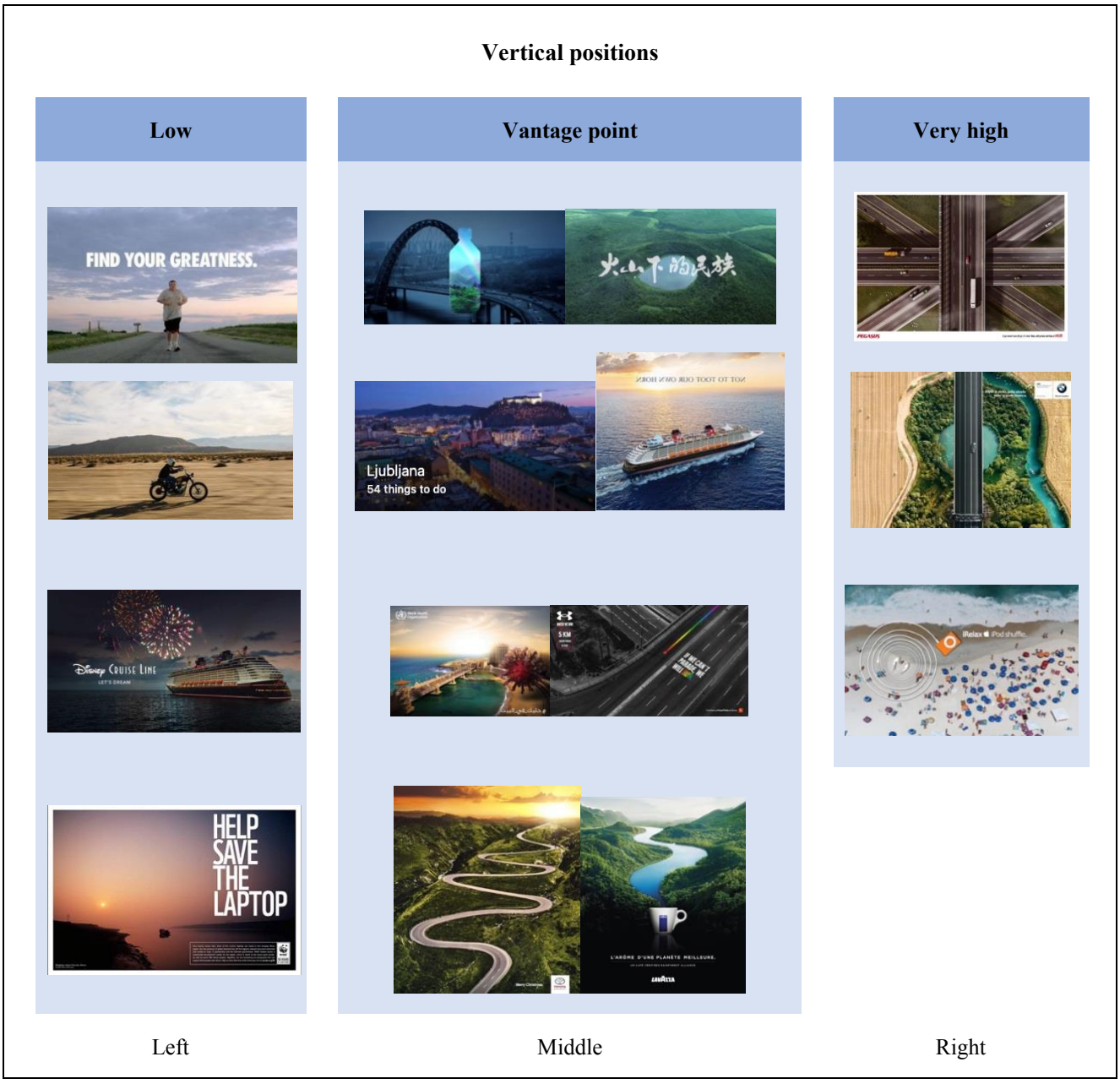


Figure 11: Landscape photos in ads categorised by vertical positions, depicting three relative vertical positions at low vertical position (left), high vertical position (middle), and very high vertical position (right)

The perceived vertical position is defined as the feeling of being at a *relatively higher vs. lower vertical position* to the terrestrial surface depicted in landscape photos. As stated by Arnheim (1957) and Gibson (2014), human's complex visual system is capable of understanding visual perspectives and projections used in

drawings and photos, allowing people to understand their point of observation through the optical structure formulated by detection of surface, shapes of the object, light, shadows, object sizes, etc. Similar principles apply when looking at a photo or drawing that mimic our real-life observations. In a similar vein, literature on stylistic properties have informed that camera movements, positions, or angles bear an iconic relationship to our real-world visual experiences (Messaris, 1997; Peracchio & Meyers-Levy, 1992; Wang & Peracchio, 2014). And changes in vertical positions of the camera produce visual representations (i.e. photos) that induce feelings of being at high vs. low vertical positions (Aggarwal & Zhao, 2015; Jami, 2019; Slepian et al., 2015). Specifically, perceived vertical position in landscape photos indicates being at a relatively higher or lower vertical positions to the observable terrestrial surface, such as the surface of the ocean or the surface of earth's ground that supports or holds up organisms (e.g., forest, mountains, animals) and man-made objects (e.g., houses, cruses, roads) (Gibson, 2014).

This proposed vertical position differs from existing conceptualisation in several ways. Firstly, the vertical position conceptualised in this thesis is not confounded with dichotomous visual angle, making it independent from verticality. As verticality is a confound and visual angle and vertical positions, any observed outcomes based on verticality can be attributed to three possible causes: 1. Independent effect of vertical position, 2. Independent effect of visual angle, or 3. Combined/interactive effect of vertical position and visual angle. Hence, previous conclusions drawn from verticality (e.g., Aggarwal and Zhao (2015); Jami (2019)); Peracchio and Meyers-Levy (1992); Slepian et al. (2015); van Rompay et al. (2012); Yang et al. (2010)) cannot explain any potential effects of vertical positions alone, as proposed in this thesis.

More importantly, empirical studies also question whether vertical positions alone, when independent from verticality, can influence consumers' responses. For instance, Orth et al. (2020) disentangled vertical positions and visual angles by asking short and tall participants to look up or down while evaluating brand power. However,

results showed that neither visual angles nor vertical positions had an independent effect on brand power evaluations. Instead, visual angles and vertical positions had an interactive effect on brand power evaluations, with vertical position serving as a moderator. Specifically, taller (vs. shorter) participants evaluated a brand as more (vs. less) powerful when looking up as compared with looking down (Orth et al., 2020).

Additionally, Van Kerckhove et al. (2015) and Roose et al. (2019) excluded the potential effect of vertical position from visual angles. In their research, as shown in Figure 9, vertical position remains unchanged while visual angle shows independent effect on consumers' processing styles. Roose et al. (2019) further argue that visual angle influences consumers' processing style independent from verticality proposed by Slepian et al. (2015). Hence, the findings from Orth et al. (2020) and Roose et al. (2019) further highlight that it is premature to conclude that vertical position in the landscape photos could influence consumers' responses when it is independent from verticality.

Second, it is important to distinguish perceived vertical position in this thesis from the vertical position of the observed object. The interpretations of vertical positions in existing literature have two different scenarios: one is how consumers interpret an observed object that is positioned at high vs. low vertical positions, and another is how consumers themselves are positioned at high vs. low vertical positions. This distinction is critical, that is, evaluating an object positioned at a high (vs. low) typically involves looking upward (vs. downward), while at a low vertical position (vs. high) relative to the object. In other words, when the observer perceives themselves as being at a low (vs. high) vertical position relative to an observed object, the object is actually at a high (vs. low) vertical position relative to the observer. Essentially, these two vertical position scenarios are reversed (Chan & Northey, 2021; Orth et al., 2020; Schubert, 2005). As a result, evaluating an object that is positioned at high vs. low vertical position is actually the opposite of evaluating the observer as

being at high vs. low vertical positions. Hence, the perceived vertical position proposed in this thesis is the vertical position of the observers.

This thesis aims to contribute to the field by investigating the effect of vertical position, as a new stylistic property of landscape photos, on advertising effectiveness. To date, no studies have proposed whether the high vs. low vertical positions can exist independent from visual angle and verticality. Also, no studies have considered whether vertical position proposed in this thesis is a prevalent phenomenon in advertising reality that is worth investigating. On the same course, when it comes to application in advertising practices, whether vertical position proposed in this thesis have any effect on consumers' responses independent from verticality is unknown (Table 1). Hence, this thesis aims to investigate the presence and prevalence of vertical position in advertising reality using landscape photos. And most importantly, how vertical position in landscape photos influence consumers' responses and subsequent advertising effectiveness.

2.4 Stylistic properties and advertising effectiveness – congruence effect

In most advertising practices, the effect of stylistic properties on advertising effectiveness is contingent upon consumer factors or additional advertising elements. In a single advertising practice, an advertising photo is one such advertising elements that is exposed to consumers, but its effect is contingent on consumer factors. For instance, consumers' processing motivation inhibits positive responses to advertising photos using visual angles: consumers with low processing motivation evaluate eye-level photos better than both upward-angle and downward-angle photos, whereas partially upward-angle photos receive positive evaluations when consumers have high processing motivation (Peracchio & Meyers-Levy, 1992). Also, the cropping effect, which enhances overall product evaluations, only occurs when consumers are highly motivated to process the photos (Peracchio & Meyers-Levy, 1994).

Despite the role of consumer factors, it is common for an advertisement to include multiple advertising elements or features. For instance, an advertisement using a photo is often accompanied by verbal messages that provide product information, ad claims, or slogan. Or the photo might depict different products with different attributes. In this case, Peracchio and Meyers-Levy (1994) show that cropping affects advertising effectiveness only when the type of advertised product (function-oriented or image-oriented) and the type of ad claims (function-oriented or image-oriented) are matched in a three-way, indicating a three-way interaction among cropping, product types, and claim types. As a result, Peracchio and Meyers-Levy (2005) later suggest that in a single advertising practice, the stylistic property is typically just one of many advertising elements, and other accompanying advertising elements and consumer factors should be taken into consideration when determining how to use stylistic

properties to enhance advertising effectiveness. The empirical evidence supports the concept of congruence in explaining advertising effectiveness.

The presence of multiple advertising elements and consumer factors can lead to effective advertising through a congruence effect. To elaborate, people tend to prefer elements within a cognitive system to be internally consistent with one another, rather than contradicting sets of information or concepts (Osgood & Tannenbaum, 1955). For instance, in the Stroop Test, participants are slower and more prone to errors when identifying the colour of coloured words on incongruent trails (e.g., the word "red" printed in blue colour), compared with congruent trails (e.g., the word "red" printed in red colour) (Stroop, 1935). Similar results have been found in the Attention Network Test, where participants are asked to indicate the direction of the middle arrow (left or right) in a set of five paralleled arrows. Participants are slower and more prone to errors when identifying the direction of the middle arrow when the middle arrow is not pointing at the same direction with the other four arrows (incongruent), compared with when all five arrows are pointing at the same direction (congruent) (Fan et al., 2002). While Stroop (1935) and Fan et al. (2002) emphasise the congruence effect among elements, a congruence effect also occurs when messages are congruent with consumers' dispositional states. For instance, messages tailored to the interests and concerns of an intended consumer (e.g., personality trait) result in a message-people congruence that enhances persuasiveness of the messages (Hirsh et al., 2012).

In line with the studies mentioned above, the congruence effect in advertising context has two predominant scenarios: one is congruence among the elements within an advertisement, referred to as **message-message congruence**, and another is congruence between the message and the consumer factor, referred to as **message-people congruence**. This concept of the congruence effect guides marketing and advertising literature in explaining advertising effectiveness across varied scenarios. More importantly, literature in visual communications has also addressed three

sources of congruence that lead to the congruence effect: semantic congruence, congruence in regulatory focus, and congruence in construal level.

2.4.1.1 Semantic congruence

The congruence effect occurs at a semantic level, where consumers' interpretations of advertising messages are congruent with another advertising message or a consumer factor that has the same semantic meaning. For instance, because a vertical orientation in stylistic properties signals power and potency and a non-vertical orientation signals dynamism, when a vertically oriented product in an ad photo is paired with power-framed ad claims, or a diagonally oriented product in the ad photo is paired with dynamism-framed ad claims, such "power" with "power" and "dynamism" with "dynamism" congruences incur the congruence effect that enhances advertising effectiveness (i.e. enhanced product attitudes and brand name recall) (Peracchio & Meyers-Levy, 2005). Similarly, as an upward-angle photo conveys the perception of power and potency, upward-angle photos enhance product evaluations when customers attend to their ought-self (i.e. whom one believes they should or must be) (Yang et al., 2010). The congruence effect can also occur when ad photo and slogan are congruent in visual perspectives, that is, a congruence between photos of actor's perspective (vs. observer's) with third-person wording (e.g., "He's leaving work") (vs. second-person wording: "you are leaving work") increases product evaluations (Meyers-Levy & Peracchio, 1996). In a similar vein, the effects of vertical orientation on luxury perceptions, price expectations, and purchase intentions are more pronounced for participants high in sociable dominance compared to those low in sociable dominance, featuring a message-people congruence (van Rompay et al., 2012). However, semantic congruence heavily relies on consumers' interpretations of semantic meanings behind advertising elements or messages, which limits its applicability across different scenarios. As a result, more studies have been bringing in higher-order constructs to explain more advertising scenarios.

2.4.1.2 Congruence in regulatory focus

Adopting the lens of regulatory focus theory, studies have sought to explain advertising effectiveness by combing regulatory focus-related concepts, often referred to as regulatory fit. Regulatory focus theory examines the relationship between the motivation of a person and the ways they pursue goals, and posits two separate and independent self-regulatory orientations: prevention focus, related to several concepts such as safety, responsibility, and avoiding losses; and promotion focus, associated with concepts such as hope, achievement, and gain (Higgins, 1997, 2012). Based on regulatory focus theory, regulatory fit theory explains congruence between regulatory focus-related concepts and their combinatorial impact on advertising effectiveness.

Regulatory fit theory argues that congruence between regulatory focus-related concepts can induce congruence effect that increases task engagement and feeling of rightness, intensifying persuasiveness of messages (Avnet et al., 2013; Cesario et al., 2004; Fazeli et al., 2020; White et al., 2011; Zhang & Yang, 2015). In advertising literature involving stylistic properties, the use of an actor's perspective triggers one's promotion orientation, while the use of observer's perceptive triggers one's prevention orientation. As a result, consumers with a promotion focus (vs. prevention focus) show more favourable product evaluations (e.g., attitude) when the product photo is taken from an actor's perspective (vs. observer's) (Zhang & Yang, 2015). Although regulatory focus is believed to go beyond semantic congruence, more recent studies are shifting attention to construal level, a higher-order construct that brings together regulatory focus-related concepts and most of semantic concepts.

2.4.1.3 Congruence in construal level

This thesis adopts the framework of congruence in construal level to explain how stylistic properties influence advertising effectiveness (Figure 3). The principle of congruence in construal level posits that advertising effectiveness can be enhanced

when factors in advertising practices (e.g., advertising elements or consumer factor) are congruent on the level of construal. In other words, consumers' construal level can influence advertising effectiveness by shaping consumers' preference towards subsequent product choices that are represented at the same level of construal. Alternatively, when advertising elements are represented at the same level of construal, customers are more likely to prefer the advertised products/services.

This framework of congruence in construal level is believed to be applicable to a wider range of marketing and advertising scenarios, as construal level encompasses many marketing and advertising related concepts and consumer factors. This is due to the fact that construal level is capable of explaining multiple semantic concepts as well as regulatory focus, and has therefore been widely adopted to explain advertising effectiveness (e.g., Adler and Sarstedt (2021); Lee et al. (2010)). In addition, marketing and advertising literature have also identified a wide array of factors that can be represented at high vs. low construal level, further demonstrating its strong applicability across a wide range of marketing and advertising scenarios.

- ***Construal level***

Mental construal refers to the way individuals perceive, comprehend, and interpret an entity, and the level of mental construal describes the level at one's cognitive hierarchy (Trope & Liberman, 2010; Trope & Liberman, 2012; Trope et al., 2007). Construal level theory (CLT) describes mental construal at two relative levels: high-level construal and low-level construal. High-level construal is an abstract, big-picture thinking style, where individuals take a superordinate or central approach to understand the overall idea of a situation and extracting its gist. On the other hand, low-level construal is a more concrete, detail-oriented, or subordinate thought process. For instance, thinking about children playing catch can be either high-level or low-level. A high-level thought process might describe this activity as "children having fun," while a low level thought process one would focus on more specific and

immediate details, such as the colour of the ball, the children's movement, or their ages (Trope & Liberman, 2012). Furthermore, in low-level construal, individuals use concrete, contextualised, and *how* representations to construe the entity, whereas in high-level construal, individuals use abstract, decontextualised, and *why* representations to construe the entity. Based on the features of construal level, it is considered a dispositional, or trait difference at an individual level (Trope & Liberman, 2010; Vallacher & Wegner, 1989).

CLT also suggests that the level of mental construal can also be situational that is influenced by four dimensions of psychological distance: temporal distance, social distance, spatial distance, and hypothetical distance (i.e. probability). The closer (vs. more distant) the psychological distance is from the individual to the target entity, the more the individual tends to use low-level (vs. high-level) representations to construe that entity (Bar-Anan et al., 2006; Fujita et al., 2006; Liviatan et al., 2008; Trope & Liberman, 2010; Trope et al., 2007; Wakslak et al., 2006). Given the definition of mental construal, studies have discovered that a plethora of factors and concepts in marketing and advertising context can be represented at either high or low level of mental construal.

- ***Factors represented at high vs. low construal level in marketing/advertising context***

According to CLT, numerous factors in marketing and advertising practice can be represented at either high or low levels of construal. As the congruence effect has suggested, advertising effectiveness should take into account not only stylistic properties but also both situational factors (e.g., advertising elements) and dispositional factors (e.g., consumer factors) (Peracchio & Meyers-Levy, 1994; Peracchio & Meyers-Levy, 2005). Similarly, construal level can serve as both a situational factor reflected in marketing materials and advertising elements, or as a dispositional factor that varies at the individual level (Bar-Anan et al., 2006; Fujita et

al., 2006; Fujita & Sasota, 2011; Trope & Liberman, 2010; Trope et al., 2007; Vallacher & Wegner, 1989). Hence, there are two main types of construal-representing factors in marketing and advertising literature.

Dispositional construal-representing factors

On the one hand, dispositional construal-representing factors reflect consumers' stable mental states that are independent from marketing materials. For instance, consumers' dispositional abstract or concrete thinking style (Ryoo et al., 2017; White et al., 2011), self-construal types (independence is low-level, and interdependence is high-level) (Spassova & Lee, 2013), regulatory-focus orientations (promotion focus is high-level, and prevention focus is low level) (Lee et al., 2010), and goal process styles (success processing is high-level, and failure processing is low-level) (Park & Hedgcock, 2016) are all related to high or low construal level. In addition, dispositional construal-representing factors depend on mental states that imply certain psychological distance cues in relation to marketing activities. For instance, a planned purchase in distant future vs. near future implies a temporal distance cue that represents dispositional high vs. low construal level. Also, a planned visit to a far vs. nearby place bear spatial distance cue that represent dispositional high vs. low construal level (Jin & He, 2013; Kim et al., 2016; Wang & Lehto, 2019; Zhao & Xie, 2011). Also, the temporal orientation of customers (future vs. immediate) also implies a temporal distance cue that indicates dispositional high vs. low construal level (Tangari et al., 2010). Furthermore, social distance between participants with themselves vs. others (Kim et al., 2008), and social distance (close vs. distant) with the recommender imply dispositional social distance cue (Zhao & Xie, 2011).

Situational construal-representing factors

On the other hand, situational construal is elicited by marketing materials. Studies have revealed a non-exhaustive list of elements in advertisements that are represented at either high or low levels of mental construal, such as textual messages (e.g., slogan

or ad claims), appeal types, and product/service features. In line with definition of construal level, abstract language in messages is considered to be high-level while concrete language is considered low-level (Kim et al., 2016; Lee et al., 2010; Park, 2020; Wang & Lehto, 2019). Emotional appeals are high-level and rational appeals are low-level (Kim et al., 2019). Primary features of a product, such as sound quality of a radio, are considered high-level, while secondary features of the product, such as accuracy of a clock on that radio, are considered low-level (Trope & Liberman, 2001). Moreover, high desirability, such as software with great feature despite difficulty of use, is considered high-level, while high feasibility, such as easy-to-use software with only basic features, is considered low-level (Fujita et al., 2008; Liberman & Trope, 1998; Zhao et al., 2007). Messages can also be framed to include psychological distance cues. For instance, messages inform distal vs. close temporal distance via addressing high-level distant future/long-term benefit vs. low-level near future/immediate benefit (Chae et al., 2013; Roose et al., 2019; Spassova & Lee, 2013; Tangari & Smith, 2012). Other dimensions such as spatial distance cues include informing geographic locations of fellow customers in social norm marketing (e.g., "75% customers in Gangnam/South Korea have joined XXX campaign) (Ryoo et al., 2017) and visual proximity between elements in an ad (Chae et al., 2013).

- ***Scenarios of congruence in construal level in advertising practices***

This thesis considers both dispositional and situational construal-representing factors in explaining how landscape photos impact attitude and behavioural intention. Landscape photos can be congruent with either dispositional construal-representing factors (message-people congruence) or situational construal-representing factors (message-message congruence), reflecting two main advertising approaches.

Dispositional construal-representing factors reflect consumer factors that are independent from marketing materials. In this case, the congruence between landscape photo with a dispositional construal-representing factor features personalised

advertisements, a message-people congruence. For instance, destination advertisements for attractions or hotels can be customised on social media or booking websites based on a customer's searching history or reservation history to a nearby or distant location (i.e. dispositional construal of spatial distance) (Wang & Lehto, 2019). Similarly, hoteliers can tailor their promotional messages on their website to customers who plan to visit either a close or distant location (Kim et al., 2016). Using this approach, Kim et al. (2016) and Wang and Lehto (2019) show that when advertisers know that tourists plan a vacation to a distant (vs. nearby) location, advertisers could use abstract (vs. concrete) promotional messages or benefit (vs. attribute) appeal to promote attractions or hotels at that location.

Situational construal-representing factors are advertising elements that are "given" to consumers. As such, these situational construal-representing factors appear in forms of slogans (Roose et al., 2019) and verbal claims (Jia et al., 2021) accompanying landscape photos. In this case, the congruence between landscape photos with a situational construal-representing factor features message-message congruence. The message-message congruence often appears in mass communication that targets general consumers. It is easier for advertisers to implement the ads as "they fully control all advertising features." (Roose et al., 2019, p.412). For instance, Jia et al. (2021) show that consumers read ads of tourism product (e.g., a tour), and consumers are also notified whether the product is located at a nearby domestic location (vs. a distant international location). As a result, participants evaluate the product more favourably when the nearby (vs. distant) product is rich (vs. pallid) in pictorial information.

Thus, this thesis takes both dispositional and situational spatial distance into consideration in order to provide a holistic view of the applications of landscape photos in two main advertising approaches.

- ***Empirical evidence of congruence in construal level***

On the basis of congruence effect assumption and extant construal-representing factors, consumers' positive responses are observed when the construal level of the message is congruent with consumers' dispositional construal level. For instance, Lee et al. (2010) found that consumers with a promotion focus tend to construe information at a high level (e.g., abstract, and goal-driven) and consumers with a prevention focus tend to construe information at a low level (detailed, and mean-driven). As a result, loss-framed (vs. gain-framed) messages are most effective in influencing consumers when consumers' have concrete (vs. abstract) mindset, or when combined with massages using concrete language (vs. abstract) (Lee et al., 2010; White et al., 2011). In a similar vein, messages with distant spatial distance cues (vs. nearby spatial distance cues) are most influential on consumers' sustainable behaviours when consumers' mindset construal level is high (vs. low) (Ryoo et al., 2017). In addition, messages using abstract language (vs. concrete language) are more persuasive when consumers have a distant future travel plan (vs. near future purchase plan) (Kim et al., 2016), and when they plan to visit a distant location (vs. close location) (Wang & Lehto, 2019). A congruence between a distant (vs. close) temporal framed message with future (vs. present) temporal orientation of customers enhances their attitude and purchase intentions (Tangari et al., 2010; Tangari & Smith, 2012). Similarly, when consumers plan to make distant future purchase decision (vs. near future), a full-satisfaction guarantee (vs. attribute-specific guarantee) increases the persuasiveness of the guarantee (Jin & He, 2013) and a benefit-based appeal (vs. attribute-based appeal) is more persuasive (Hernandez et al., 2015). In addition, A congruence between temporal distance and independent (high-level) or interdependent (low-level) self-construal increases advertising effectiveness (Spassova & Lee, 2013).

In line with the congruence effect assumption, consumers' positive responses are often seen when multiple message/advertising elements are congruent in their

construal levels. For instance, a congruence between temporal and spatial distance cues in advertising elements enhances judgement of product effectiveness (Chae et al., 2013). Advertisements featuring past (vs. future) temporal focus induced by advertising photos, combined with traditional product (vs. modern), increase advertising liking (Biliciler et al., 2021). In a similar vein, stylistic properties can enhance advertising effectiveness through the congruence in construal level. For instance, photos depicting high verticality (vs. low verticality) increase preference for slogans that emphasise high desirability considerations (vs. high in feasibility) (Aggarwal & Zhao, 2015). Photos depicting a short visual distance (i.e. cropping) increase preference for products with rational appeals, whereas photos depicting a long visual distance (i.e. non-cropping) increase preference for product with emotional appeal (Kim et al., 2019). Photos depicting upward visual angle (vs. downward visual angle) increase evaluations on advertisements when combined with slogans that show distant future benefit (vs. near) (Roose et al., 2019).

Despite a variety of construal-representing factors explored in marketing and advertising literature, there are still unknown aspects that need to be investigated with regards to the effect of vertical position in landscape photos on advertising effectiveness. These aspects include 1. whether vertical positions in landscape photos evoke construal level. 2. whether the framework of congruence in construal level is an appropriate explanation for the effectiveness of advertisements using landscape photos. 3. if so, which construal-representing factors appear in combination with landscape photos in advertising reality, and 4. whether a congruence effect is induced when vertical position in landscape photos is combined with another construal-representing factor (either dispositional or situational).

Hence, the development of this thesis is guided by the framework of congruence in construal level (Figure 3). This thesis aims to investigate the associations between vertical position with construal level by reviewing literature in visual antecedents of construal level. From a practical point of view, this thesis aims to identify the

presence of additional construal-representing factors in combination with landscape photos in real-life advertising practice. Finally, this thesis uses the congruence framework to explain advertising effectiveness.

2.5 Associations between stylistic properties and construal level

2.5.1 Visual antecedents of construal level

Literature on visual antecedents of construal level is unique in consumer research and a sub-stream line of the literature on stylistic properties (Table 3). Studies have found that visual stimuli can lead to changes in construal level through a variety of mechanisms. For instance, previous studies have shown that black-and-white photos elicit the feeling that the depicted event took place in the past, while colourful photos elicit the feeling that the depicted event is taking place in the present or will take place in the future. This effect occurs because people are continuously exposed to visual media of black-and-white photos, which feature photographic technology in the past. Hence, black-and-white photos induce low construal level, while colourful photos induce high construal level (Lee et al., 2014; Lee et al., 2017). In addition, because people are accustomed to process information from left to right, photos that feature a product facing left vs. right (Zhang et al., 2019) or product positioned at left vs. right (Chae & Hoegg, 2013) imply the previous vs. later sequence of event on mental timelines, which subsequently shift consumers' past vs. future focus as well as low vs. high construal level (Chae & Hoegg, 2013; Zhang et al., 2019). Furthermore, photos depicting low visual entropy (photos showing well-organised elements) give rise to an interest in the future (what will happen next, after the picture was taken), which leads to future focus (high-level), while photos depicting high visual entropy (photos showing messy elements) give rise to an interest in the past (what happened earlier,

before the picture was taken), which leads to past focus (low-level) (Biliciler et al., 2021).

Several established stylistic properties also play a role in shaping construal level. For instance, the use of cropping (vs. non-cropping) has been shown to evoke a sense of looking closely (vs. looking distantly), which conveys close (vs. distant) visual-spatial distance cues in photos and influences construal level through the spatial distance dimension (e.g., Bar-Anan et al. (2007); Hansen and Wanke (2010); Kim et al. (2019)). The visual perspective also has an impact on construal level. Photos taken from an actor's perspective lead to low level construal, while photos taken from an observer's perspective lead to high-level construal via spatial distance dimension, as the former makes consumers feel that they have a close physical-spatial distance with the object, while the latter elicits a sense of distant spatial distance (Libby et al., 2009; Libby et al., 2011; Libby & Eibach, 2011). Interestingly, the effect of visual angle on construal level is also rooted in the spatial distance dimension. Specifically, Van Kerckhove et al. (2015) showed that consumers who look up tend to overestimate the visual-spatial distance to the target, leading to high-level of construal. On the contrary, consumers who look down tend to underestimate the visual-spatial distance to the target, leading to low-level of construal. This effect of visual angle on construal level and its underlying mechanism is also supported by Roose et al. (2019), which found that this effect holds even when using photos taken with upward vs. visual angle, as consumers are induced with the feeling of looking up as opposed to looking down. Previous studies also examined the effect of vertical position on construal level, but findings are inconsistent

2.5.2 Inconsistent effects of vertical position on construal level

A central contention of this thesis is that the current conclusion on the effect of vertical position on construal may be premature. This thesis aims to explain the inconsistencies in existing literature regarding two aspects: 1. the current conceptualisation of vertical position and 2. the existing theoretical explanations for the effect of vertical position on construal level.

In the existing literature, vertical position has only been studied as one visual component of verticality. This means that the potential effect of vertical position on construal level may only be a part of the effect of verticality on construal level, as verticality encompasses both vertical positions and visual angles, and results are inconclusive (Table 4). Specifically, Slepian et al. (2015) and Aggarwal and Zhao (2015) show that photos taken from high verticality (i.e. a high vertical position with a downward angle), compared with photos taken from a low verticality (i.e. a low vertical position with an upward angle), induce high-level construal (i.e. abstract processing style). However, this combinatorial effect between vertical position and visual angle makes it impossible to determine the independent effect of vertical position on construal level. In other words, the observed effect in Slepian et al. (2015) and Aggarwal and Zhao (2015) could have three logical causal inferences:

1. Vertical position has an independent effect on construal level,

2. Visual angle has an independent effect on construal level, or

3. Vertical position and visual angle have an interactive effect on construal level.

Despite the multi-facet causal inferences, even more surprisingly, the conceptualisation of verticality has been found to have an invalid and even reversed effect on construal level. For instance, Jami (2019) found no effect of verticality on construal level, raising further doubt about whether vertical position, when considered independent from verticality, could still influence construal level. Additionally, the

independent effect of visual angle on construal level is contrary to the effect of visual angle in verticality. That is, an upward visual angle (vs. downward visual angle) leads to high-level construal (vs. low-level construal) due to the overestimation (vs. underestimation) of visual-spatial distance (Roose et al., 2019; Van Kerckhove et al., 2015). However, this finding is contrary to the effect of upward visual angle (vs. downward visual angle) observed in Slepian et al. (2015) and Aggarwal and Zhao (2015), where an upward visual angle (vs. downward visual angle) induced low-level construal (vs. high-level construal). Therefore, Roose et al. (2019) and Van Kerckhove et al. (2015) raise concerns about using the conceptualisation of verticality to interpret the independent effect of either visual angle or vertical position on construal level. Despite the inconsistent results, no studies have been able to successfully explain how vertical position is associated with construal level.

Aggarwal and Zhao (2015) (Study 2) proposed that perceptual scope may explain the effect of vertical position on construal level. According to Aggarwal and Zhao (2015), as vertical position increases, it inherently increases the visual distance with the target scene or the object (e.g., standing higher tends to result in seeing farther away). The increases in both vertical position and visual distance afford a greater perceptual scope (e.g., a higher vertical position and distant visual distance allow one to see more) that evokes global processing (i.e. higher-level construal).

However, Slepian et al. (2015) disagree that perceptual scope is the underlying mechanism, as it is only influenced by visual distance and not by vertical position. As such, in Aggarwal and Zhao (2015) (Studies 3 and 4) and Slepian et al. (2015), the actual perceptual scope was controlled by maintaining the same visual distance to the object (e.g. mug), regardless of the vertical position. The findings showed that upward-angle photos taken from below the object lead to a low-level construal, and downward-angle photos taken from above the same object led to a high-level construal. As a result, Slepian et al. (2015) believe that any potential effect of vertical position in verticality on construal level is independent of perceptual scope.

Furthermore, findings in Jami (2019) showed that perceptual scope may moderate, rather than explain, the potential effect of vertical position on construal level. Jami (2019) adopted the same manipulation technique proposed by Aggarwal and Zhao (2015) (Study 2) using landscape photos but observed no effect of vertical position on construal level. Jami (2019) speculates that the landscape photos may already afford a great perceptual scope (a sense of coherence) that overtook the effect of the added perceptual scope associated with the increasing vertical position and visual distance. This suggests that the perceptual scope may moderate the effect (if any) of vertical position on construal level.

In addition, Aggarwal and Zhao (2015) and Slepian et al. (2015) suggested that metaphorical associations with vertical positions may influence construal level. For instance, imagining going up to the first floor (vs. going down to the basement), walking up (vs. walking down), being above the object (vs. being below the object), and being physically high above the surface (vs. down below the surface) are thought to be associated with metaphors that are represented at a high-level construal (vs. low-level) such as power, happiness, and seeing the big picture (vs. weak, sadness, and seeing details) (Aggarwal & Zhao, 2015; Slepian et al., 2015). As such, Aggarwal and Zhao (2015) (Studies 3 and 4) and Slepian et al. (2015) show that when consumers perceive that they are looking upward from a down-below place (i.e. low verticality), they exhibit a low-level construal. And when they perceive that they are looking down from a high-above place (i.e. high verticality), they exhibit a high-level construal. In addition, Aggarwal and Zhao (2015) believed that consumers should exhibit varied construal levels due to "mere priming of concepts of high and low may be enough" (p. 130). However, participants in Jami (2019) perceived a significant difference in high and low vertical positions after exposure to landscape photos but they did not exhibit differences in construal level.

Above all, this thesis contents that the inconsistent effect observed in previous studies is due to unclear conceptualisations of vertical position and a lack of solid

theoretical foundations. To date, no study has proposed or tested a sound mechanism that explains the effect (if any) of vertical position on construal level. In order to more accurately investigate how vertical position influences advertising effectiveness, this thesis aims to address the inconsistent effect of vertical position on construal level.

2.6 Research gaps and research questions

2.6.1 Conceptualisation of vertical positions

The first research gap pertains to the conceptualisation of vertical position in visual communication literature. Based on the utilisation of landscape photos in real-life advertising practices (Figure 1 and 2, also see Appendix A), and a review of the literature on visual communication, particularly stylistic properties and the ambiguous conceptualisations of vertical position, this thesis proposes a new typology of vertical position that is distinct and operates independently from visual angle and verticality. However, there is currently no empirical evidence to support the existence of this proposed vertical position as an independent phenomenon, separate from visual angle and verticality. And its prevalence in real-life advertising practices is unknown (Table 1). To tackle these research gaps, this thesis will need to answer:

- ***RQ1: Is vertical position conceptualised in this thesis a prevalent stylistic property used in advertisements, compared with visual angle and verticality?***

In addition, there is a lack of research on the impact of the newly conceptualised vertical position on advertising effectiveness. Based on the literature review, no studies have explored the relationship between this typology of vertical position and advertising effectiveness. To address this research gap, this thesis has conducted a comprehensive literature review on the visual antecedents of construal level and congruence in construal level. The aim of this literature review is to identify potential associations between vertical position and construal level and to understand the factors that influence advertising effectiveness through congruence in construal level. As such, this thesis has included:

1. Literature review on visual antecedents of construal level to understand the potential associations between vertical position and construal level.

2. Literature review on congruence in construal level to identify:

    - The factors that can be represented at high or low construal levels that appear in combination with landscape photos in advertising practices.
    - Evidence of potential congruence effect between vertical position and the construal-representing factor on advertising effectiveness.

This literature review has revealed several research gaps that need to be addressed in order to fully understand the impact of vertical position on the effectiveness of advertisements using landscape photos.

2.6.2 Effect of vertical position on construal level and the underlying mechanism

The second research gap pertains to the inconsistent relationship between vertical position and construal level. A review of literature on visual antecedents of construal level in consumer research revealed that it remains unknown whether the vertical positions conceptualised in this thesis can influence construal level (Table 3). In existing studies, the potential effect of vertical positions on construal level has only been examined under the conceptualisation of verticality. However, the findings are not only debatable (Table 4) (e.g., Aggarwal and Zhao (2015); Jami (2019); Slepian et al. (2015)) but also, it remains unknown whether the vertical position, independent from verticality, has any effect on construal level (Table 4). Thus, this thesis is intended to tackle this theoretical gap and contribute to a new visual antecedent of construal level by answering:

- ***RQ2: Does vertical position conceptualised in this thesis have an effect on construal level (abstractedness/concreteness processing style)?***

The third research gap involves the insufficient knowledge regarding the theoretical foundations that explains the mechanism underlying the potential effect of

vertical position on construal level. To date, no studies have proposed or tested a sound mechanism to explain the effect (if any) of vertical position on construal level (Table 4). As such, this thesis aims to provide a solid theoretical foundation that explains the effect of vertical position on construal level by answering:

- ***RQ3: If vertical position influences construal level, what is the underlying mechanism?***

2.6.3 Congruence in construal level between vertical position and another construal-representing factor on advertising effectiveness

The fourth research gap concerns the absence of empirical knowledge on the effectiveness of advertisements using landscape photos. Based on the framework of congruence in construal level, despite the discovery of a variety of construal-representing factors across marketing and advertising contexts, it remains unknown which construal-representing factors appear in combination with landscape photos in real-life advertising practices. Hence, this thesis firstly identifies construal-representing factors in combination with landscape photos by answering:

- ***RQ4: What is the most prevalent construal-representing factor accompanying landscape photos in advertisements?***

Adopting the framework of congruence in construal level, this thesis proceeds with practical applications of landscape photos in advertising practices. To date, no studies have shown if vertical position and another construal-representing factor would have congruence effect that enhances advertising effectiveness (Table 2). This thesis then contributes to advertising practices and the literature on congruence in construal level by answering:

- ***RQ5: Do vertical position with another construal-representing factor have a congruence effect on attitude and behavioural intention?***

2.7 Chapter conclusion

This chapter reviewed the main streams of literature in visual communication (stylistic property), visual antecedents of construal level, and congruence in construal level. Firstly, the definition of landscape photos in the research context was presented and the existing studies on how visual content in landscape photos can influence advertising effectiveness were reviewed. The discussion then shifted to a more generic factor, stylistic property, that also impacts advertising effectiveness.

With a focus on the literature in visual communication, particularly literature in stylistic properties, this chapter introduced a new typology of perceived vertical position in landscape photos. Therefore, the needs for empirical evidence on its prevalence and uniqueness were emphasised.

The adoption of congruence in construal level led to the discovery of research gaps regarding the effect of perceived vertical position on construal level and empirical evidence on the congruence in construal level between vertical position and other construal-representing factors. Firstly, whether and how the perceived vertical position would affect construal level is unknown. Secondly, the construal-representing factor in combination with landscape photo also remain unknown. Thus, these two key aspects will need to be investigated and addressed.

With the gaps identified from the literature review, this thesis is ready to develop theoretical foundations for testable hypotheses. The literature review has highlighted several key research gaps in the field of visual communication, visual antecedents of construal level, and congruence in construal level. By addressing these research gaps, this thesis aims to provide a comprehensive understanding of how vertical position in landscape photos can influence advertising effectiveness. The focus on attitude and

behavioural intention as proxies of advertising effectiveness highlights the importance of understanding how perceived vertical position in landscape photos can impact consumers' construal level, and ultimately affect their attitudes and intentions towards the advertised product/service. The next chapter will delve into the theoretical development of testable hypotheses and provide a solid foundation for the subsequent empirical investigation.

Chapter 3: Hypothesis Development

Chapter Content

3.1 Chapter introduction

With the research gaps identified in the literature review, this chapter presents a theoretical development to provide a comprehensive explanation for the proposed research questions RQ2, RQ3, and RQ5.

Section 3.2 introduces the theory of mental simulation to explain how visual perception, such as perceived vertical position, could lead to changes in cognition, such as construal level. The theory of mental simulation suggests that the cognition is grounded in mental reenactment of physical experience with the vertical position.

Section 3.2 explains how people interpret their perceived vertical position in relation to construal level. In this section, taking the theoretical perspective of the self-concept, particularly the inclusion of objects in the self, this thesis attempts to explain that the inclusion in the self is the underlying mechanism that explains the potential effect of perceived vertical position on construal level. H1 and H2 are proposed in this section.

Section 3.3 proposes three assumptions to explain the congruence in construal level that enhances advertising effectiveness. These assumptions include feeling right, processing fluency, and mutual eliciting nature between construal-representing factors.

Section 3.4 then presents research models to visualise the hypotheses and relationships among the proposed constructs.

This chapter concludes with a summary of the theoretical development and sets the stage for the empirical investigation in the next chapters.

3.2 Perceived vertical position and construal level

3.2.1 Mental simulation bridges perceived vertical position to cognition

Mental simulation is the theory that explains how perceived vertical position influences consumers' cognitive responses (e.g., construal level). According to the theory of mental simulation, when a bodily experience occurs (e.g., having an elevated viewpoint), the brain captures bodily states across modalities (e.g., feeling detached from the landscape) and integrates them with multimodal representations stored in memory. Later, when knowledge is needed to represent a category (e.g., elevation or high vertical position), multimodal representations that have been stored during the experience with its instances are reactivated to simulate how the brain represents perceptions and action associated with the experience (Barsalou, 2008; Decety & Ingvar, 1990). In other words, mental simulation of a bodily experience initiates mental states associated with the bodily experience without physically experiencing that bodily experience, it is a mental reenactment of the bodily experience.

Empirical studies on mental simulation suggest that simply using visual or verbal instructions can activate mental simulation of our bodily experiences. Mental simulation produces the same neural activations as if we actually and physically experiencing those bodily experiences. For instance, reading the word "cinnamon" leads to neural activation in the primary olfactory cortex, as if we physically taste the cinnamon (González et al., 2006). Mental imagery of musicals activates neural activities of the auditory cortex, as if we physically listen to a musical (Zatorre & Halpern, 2005). And when thinking about chocolate, people mentally simulate perceptions associated with the chocolate such as how soft it is when we actually bite into it (Barsalou, 2008).

In a similar vein, visual stimuli activate mental simulation. Gibson (2014) stated that "travel pictures take one to where the traveller has been, battle picture takes one into the heart of the melee, and historical pictures take one to the forum of ancient Rome" (p. 271). As such, viewing photos of a mug with a handle activates our mental simulation of the bodily experience of picking up the mug (Elder & Krishna, 2012). Photos depicting a high horizon (i.e. the line that separates the sky and the ground) (vs. a low horizon) simulate looking down (vs. up) head/eye movement (Figure 9), and subsequently lead to concrete processing style (vs. abstract processing style) (Roose et al., 2019). Therefore, mental simulation of a bodily experience leads to neural activation of many of the same sensory regions of the brain that is activated during the bodily experiences/perceptions (Barsalou, 2008).

Therefore, it is crucial to understand how people interpret low and high vertical positions and how the perceived vertical position is associated with the determinants of construal level. This understanding will allow further explanations on how mental simulation of vertical position leads to changes in construal level.

3.2.2 Determinants of construal level

Studies on the construal level theory (CLT) have identified three pathways that influence the level of mental construal. High-level construal represents an abstract thinking style on a big picture level, while low-level construal represents a more concrete, detail-oriented, or subordinate thought process, addressing the details and differences within a situation (Bar-Anan et al., 2006; Fujita et al., 2006; Liviatan et al., 2008; Trope & Liberman, 2010; Trope & Liberman, 2012; Trope et al., 2007; Wakslak et al., 2006). In line with the CLT, there are three pathways in determining construal level: conceptual level of construal, perceptual level of construal, and psychological distance.

3.2.2.1 Conceptual level of construal

The conceptual level of construal indicates the conceptual scope that reflects one's construal level. By definition, mental construal describes how individuals perceive, comprehend, and interpret an event/object (Trope & Liberman, 2010; Trope & Liberman, 2012; Trope et al., 2007). And conceptual scope is the extent to which an individual appreciates the abstract (high-level) vs. concrete (low-level) meanings/concepts. In other words, conceptual scope implies construal level.

For instance, according to the action identification theory (Vallacher & Wegner, 1985, 1989), individuals who attend to "why" aspects (e.g., securing the house) of an action (e.g., locking the door) are high in construal level, while individuals who attend to "how" aspects (e.g., putting a key in the lock) of the same action are low in construal level. This is because "why" aspects address the end state while "how" aspects address the means in achieving the end state (Liberman & Trope, 1998).

The conceptual level of construal is also reflected by how well people believe that an example can represent a semantic category. To elaborate, Rosch (1975) noted that a semantic category such as "bird" can be understood through multiple examples, in

people's mind, "robin" is generally a better example of "bird" than "parrot", while "parrot" is generally a better example than "penguin". Hence, people who endorse an abstract processing style (i.e. high-level construal), compared with people who endorse a concrete processing style (i.e. low-level construal), tend to consider that all these three examples well represent the category "bird" as a result of focusing less on detailed variances among the bird examples, indicating a higher level of thinking style (Isen & Daubman, 1984; Rosch, 1975). Hence, conceptual scope informs that when people attend to use high-level (vs. low-level) meanings to construe an event/object, they are high (vs. low) in construal level. Meanwhile, conceptual scope has become the most common measurement instrument and the most straightforward manifestation of one's construal level (Liberman & Trope, 1998; Trope et al., 2007).

A considerable number of studies suggested that there may be metaphorical associations between vertical position and construal level, which is based on the conceptual level of construal. Specifically, theory of sensorimotor metaphor suggests that there is a type of metaphorical associations that explains what metaphors people would use to understand certain bodily movement, positions, gestures, or locations (Lakoff & Johnson, 1980; Lakoff & Johnson, 1999). For instance, metaphors that are associated with "high up" and "down below" physical locations are believed to influence construal level at a conceptual level (Figure 12, left).

The theory of conceptual metaphors suggests that there are several metaphorical concepts related to vertical positions. For instance, "up" and "down" vertical positions are commonly used metaphorically to represent concepts such as "more is up" and "less is down", "powerful is up" and "powerless is down" (Lakoff & Johnson, 1980; Lakoff & Johnson, 1999). Positive words such as hero, power, polite, etc. are associated with "up," and they are categorised more quickly when shown on the upper half (above the centre of the screen) of the screen than shown on the lower half of the screen (Meier & Robinson, 2005; Schubert, 2005). Also, people associate God-Devil with up-down positions, and they encode God-related (vs. Devil-related) concepts

faster when God-related concepts (vs. Devil-related) are placed in the upper half (vs. lower half) of the computer screen (Meier et al., 2007).

Grounded in sensorimotor metaphor, it is believed that metaphorical associations with vertical positions influence construal level. For instance, imagining going up to the first floor (vs. going down to the basement), walking up (vs. walking down), being above the object (vs. being below the object), and being physically high above the surface (vs. down below the surface) are believed to be associated with metaphors that are represented at a high-level construal (vs. low-level) such as power, happiness, and seeing the big picture (vs. weak, sadness, and seeing details) (Aggarwal & Zhao, 2015; Slepian et al., 2015). Also, Yan (2012) confirmed that the metaphorical associations as the theoretical foundation in Aggarwal and Zhao (2015) is based on the vertical positions in verticality (Figure 12, left). That is, participants imagining a ride in a hot-air balloon (high vertical position above the surface of the ground) or a deep-sea diving trip (low vertical position below the surface of the ground). As such, Aggarwal and Zhao (2015) (Studies 3 and 4) and Slepian et al. (2015) show that when consumers perceive that they are looking upward from a down-below place (i.e. low verticality), they exhibit a low-level construal. And when consumers perceive that they are looking down from a high-above place (i.e. high verticality), they express a high-level construal. In addition, on the basis of metaphorical associations, Aggarwal and Zhao (2015) believe that consumers should express varied construal level anyway because "mere priming of concepts of high and low may be enough" (p. 130). However, metaphorical associations show several restrictions when the vertical position does not go down under the surface of the ground.

There are several limitations in explaining the potential effect of vertical position on construal level through metaphorical associations. First, the assumptions made on the basis of metaphorical associations often conflate the vertical positions of the observed object and the vertical positions perceived by the observers themselves. When observers perceive that the object is positioned on the high position (vs. low),

the observer is, on the contrary, at a low (vs. high) vertical position relative to the observed object, and vice versa (Meier et al., 2007; Meier & Robinson, 2005). Most importantly, the "high" and "low" metaphorical associations are not only originated from the judgment about the object, but also are dedicated to make judgments about the object. For instance, metaphors such as "the righteous go up to heaven" vs. "the sinners go down to hell" are used to judge the object that is placed on the top of the screen vs. the bottom of the screen (Meier et al., 2007; Meier & Robinson, 2005). However, the same judgment should inform reversed outcomes when it comes to the observers. In support of this argument, an object that is positioned at a high vs. low position relative to the observer normally involves looking upward vs. downward, regardless of observers' vertical positions (Schubert, 2005). Hence, metaphorical associations are about the vertical position of the observed object but not necessarily associate with the observers' vertical position.

Second, metaphorical associations are insufficient in explaining the effect of vertical position on construal level when the "down below" scenario is absent. As demonstrated in Figure 10 and as illustrated in Figure 12 (right), there is no "down below" in landscape photos because landscape photos are normally taken above the surface of the ground (Jami, 2019). Nonetheless, participants could still perceive changes in vertical positions from above the surface of the ground (Jami, 2019). In addition, findings of Jami (2019) contradict the argument made by Aggarwal and Zhao (2015) that the condition influencing construal level is "mere priming of concepts of high and low may be enough" (p. 130). Participants in Jami (2019) perceived high and low vertical positions after exposure to landscape photos (Figure 12, right); however, they did not exhibit differences in construal level, probably because there is no "down below" in landscape photos used in Jami (2019). Hence, the empirical findings of Jami (2019) further challenge the idea of metaphorical associations, as consumers exhibit no difference in construal level even though they

have perceived the "mere change" in vertical positions, as proposed by Aggarwal and Zhao (2015, p. 130).

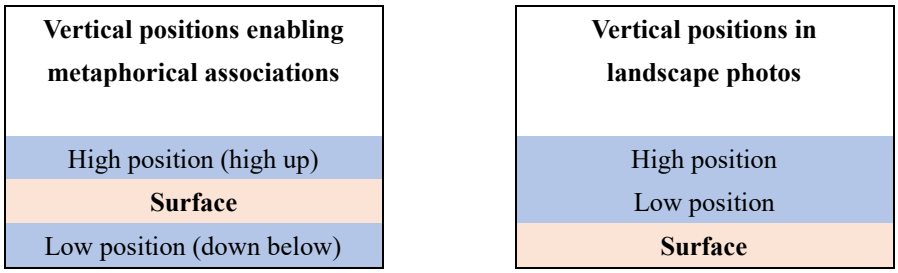


Figure 12: Conditions of vertical positions enabling metaphorical associations (left) and vertical positions in landscape photos (right)

Third, metaphorical association rely on prior knowledge with regard to vertical positions. Participants' metaphorical associations are grounded in their prior knowledge and experiences (Lakoff & Johnson, 1980; Lakoff & Johnson, 1999; Slepian et al., 2015). In other words, consumers must have prior knowledge of the metaphorical concepts associated with "down below" and "high above" vertical positions before vertical positions in landscape photos take any effect. Hence, the assumption that consumers already have an understanding of vertical positions through metaphorical associations is not evident. In addition, there is no systematic guide indicating which concept should be represented at high vs. low-level, as CLT emphasises the *relative levels of mental construal*, indicating that each concept can appear to be high or low depending on which concept they are paired with. In other words, concepts must be compared in pairs to determine relative construal levels. Since there is no systematic guide indicating which concept, meaning, or word is at a higher level than another, it is not durable to consider metaphorical association as a solid theoretical foundation.

3.2.2.2 Perceptual level of construal

The second pathway that influences construal level is the perceptual level of construal, which suggests that the visual system categorises perceptions into global vs. local, inducing high vs. low construal levels (Liberman & Förster, 2009; Navon,

1977). To illustrate, in the Navon Task (Figure 13), a big letter made of small letters (e.g., a big H composed of small Es) represents a global letter (i.e. H) and a local letter (i.e. E) (Navon, 1977). When participants focus on the global letter, they have a global perceptual focus, indicating a broad perceptual scope that give rise to a sense of coherence at a high level of construal. On the contrary, when participants focus on the local letter, they have a local perceptual focus, indicating a narrow perceptual scope, which leads to a low level of construal. In CLT, mental construal is characterised by global (i.e. abstract) versus local (i.e. concrete) processing styles (Slepian et al., 2015; Trope & Liberman, 2010). Thus, asking participants to respond to global letters activates a global perceptual focus that induces high-level construal (i.e. abstract processing style), while asking participants to respond to local letters activates a local perceptual focus induces low-level construal (i.e. concrete processing style) (Liberman & Förster, 2009; Trope & Liberman, 2010).

Figure 13: Navon task

The relationship between vertical position and perceptual level of construal has been the subject of various studies, yet the results remain debatable. Aggarwal and Zhao (2015) content that "being physically higher usually leads to a wider physical view from one's vantage point" (p. 122), indicating a wide perceptual scope. However, Slepian et al. (2015) found that perceptual scope is irrelevant to vertical position, as it is only influenced only by visual distance, which may or may not change with vertical position. Indeed, in Aggarwal and Zhao (2015) (Studies 3 and 4)

and Slepian et al. (2015), the actual perceptual scope was controlled by keeping the same visual distance to the object (e.g. mug), regardless of the vertical positions. Moreover, according to Jami (2019), perceptual scope appears to be a moderator of possible effect of vertical position on construal level instead of being a mediating mechanism. The findings by Jami (2019) showed that although participants perceived changes in vertical positions, they did not exhibit changes in construal level when they are exposed to landscape photos. Jami (2019) speculates that landscape photos may have already provided a visual coherence due to their rich visual content. This speculation indicates that perceptual scope may play a moderating role.

3.2.2.3 Psychological distance

The basic premise of CLT is that the more psychologically distant an event is removed from the perceiver, the more it will be represented at higher level of construals (Trope & Liberman, 2010; Trope et al., 2007). Psychological distance is generally defined as a cognitive separation between the self and other instances such as people or events, and it reflects the degree to which people feel removed from a phenomenon (Baltatescu, 2014; Liberman & Förster, 2009; Trope & Liberman, 2010; Trope et al., 2007). It is important to note that psychological distance must be egocentric, originating from the self (Liberman & Trope, 1998). For instance, priming participants' construal level affects their subjective estimation of spatial distance between them to the sticker in the room (i.e. egocentric). However, their primed construal level does not affect their subjective estimation of spatial distance between the experimenter and a marked desk in the room (i.e. non-egocentric) (Liberman & Förster, 2009). Of determinants of psychological distance, existing studies have established four dimensions of psychological distance: social distance, temporal distance, spatial distance, and hypothetical distance (e.g., probability) (Liberman & Förster, 2009; Trope & Liberman, 2010). Likewise, psychological distance in CLT usually indicates how an event is mentally represented as socially distant from

oneself, temporally distant from the present, spatially distant from the current location, and how likely it is to happen. The relationship between psychological distance and construal level is believed to result from the association between direct experience and event information. For instance, when an event occurs here and now, there is usually a wealth of information available, leading to a tendency to think about it using concrete, low-level concepts. Conversely, when an event will occur in the future or in a distant location, there is usually limited, concrete, or reliable information available, leading to a tendency to use abstract and schematic concepts to represent the event (i.e. high-level construals) (Trope & Liberman, 2010; Trope et al., 2007). Of determinants of construal level, this thesis opts to the link between vertical position and psychological distance, which has been neglected by previous studies.

Intuitively, vertical position might be considered a spatial distance dimension that influences psychological distance and construal level. However, the spatial distance dimension is believed to take effect only when it is horizontal or directly observable. To elaborate, spatial distance is conceptualised as the spatial location where the event happens at a close location (e.g., 10 miles away) or a distant location (e.g., 3000 miles away) (Fujita et al., 2006). However, changing the vertical position does not require changing the spatial location at which the event is located.

In addition, spatial distance in visual communication refers to the "*visual-spatial distance*" between the *perceivers* and the *subjects of their visual focus*, not the spatial distance that is irrelevant to this dyad. For instance, Hansen and Wanke (2010) and Bar-Anan et al. (2007) instructed participants to look at an arrow in photos that appears at a near vs. distant location. Similarly, cropping (vs. non cropping) in Kim et al. (2019) directly pulls consumers' visual focus on the details (vs. big picture) of the photos. Also, in Roose et al. (2019) and Van Kerckhove et al. (2015), consumers still focus on the visual elements within their visual field when they adopt upward vs. downward visual angles. And the visual-spatial distances between perceiver and subjects of their visual focus leads to changes in construal level (Bar-Anan et al.,

2007; Hansen & Wanke, 2010; Kim et al., 2019; Roose et al., 2019; Van Kerckhove et al., 2015). As such, visual-spatial distance must be "seen" by the observers in order to act as an underlying mechanism. However, vertical position is the "feeling" of being at a high vs. low vertical position, which does not appear to be the visual-spatial distance between the perceivers and their visual focus because it is not directly observable in the visual field of observers.

Considering the constraints of spatial distance dimension, this thesis investigates the egocentric characteristic of psychological distance by adopting the theoretical lens of the self-concept. It then denotes that the feeling of being at a high vs. low vertical position influences psychological distance through how consumers perceive themselves in relation to the physical environment depicted in landscape photos.

3.2.3 Perceived vertical position influences construal level via inclusion in the self

3.2.3.1 Vertical position and inclusion in the self

- ***Vertical position and detachment from the depicted environment***

With an increase in perceived vertical position, people should feel more separated and detached from the physical environment depicted in landscape photos. In line with the theory of mental simulation, Gibson (2014) argues that pictures have the power to situate the observers in a virtual environment as one is transported. As such, "travel pictures take one to where the traveller has been, battle picture takes one into the heart of the melee, and historical pictures take one to the forum of ancient Rome…what is induced in these pictures is not an illusion of reality but an awareness of being in the world" (Gibson, 2014, p. 271). Likewise, landscape photos usually depict physical environments, which refer to the surroundings such as dirt, water, houses, gardens,

forest, traffic, sidewalks, etc. in which individuals live, learn, work, play and so on (Evans, 2006; Prelinger, 1959).

Regarding vertical positions relative to the landscape, from an evolutionary perspective, human normally seek vertical elevation with the purpose of separating themselves from the threats down on the ground such as predators and natural disasters (Jackson & Cormack, 2007; Keeley, 1996). Similarly, our real-life experiences inform us that having an elevated viewpoint (e.g., being on an airplane high above) often requires separation from the physical environment on the earth's ground. Potentially, with an increase in vertical position, such separation or detachment from the depicted physical environment might subsequently shape human's situational inclusion of the depicted physical environment in their self-concept.

- ***Detachment and inclusion in the self***

The theory of the extended self suggests that human have the capacity to include objects in their self-concept (Belk, 1988; Prelinger, 1959). Self-concept is often considered a cognitive and descriptive component of one's self, emphasising the question "who am I?" (Markus, 1977). Self-concept refers to the collection of beliefs and perceptions that an individual holds about themselves. It encompasses various aspects, including one's physical appearance, abilities, values, roles, and overall identity. In simpler terms, self-concept is how a person sees and defines themselves. This concept is dynamic and can change over time as individuals gather new experiences, receive feedback from others, and undergo personal growth. Self-concept is influenced by various factors such as social interactions, cultural background, personal achievements, and the feedback received from others (Epstein, 1973; Markus, 1977). Along with the biological components of our body (e.g., skin, organ) that are considered as parts of our "self", the "material self" proposed by James et al. (1890) suggests that we also tend to perceive certain objects as parts of our "self",

which pertains to the objects, places, or other people labelled as “mine.” For example, possessions are viewed as extensions of self-concept described as “my car”, “my money”, or “my dog” (Belk, 1988).

This phenomenon of considering others as part of the “self-concept” is named “inclusion in the self” (Aron et al., 1992; Aron et al., 1991; Prelinger, 1959) or “oneness” (Cialdini et al., 1997), as it reflects a feeling of a degree of mutuality towards "objects to be parts of our selves" (Prelinger, 1959, p. 13) and "perceive ourselves in the other" (Cialdini et al., 1997, p. 483). While self-concept is a comprehensive term describing an individual's overall perception of themselves, "inclusion in the self" specifically focuses on the incorporation of others into one's self-concept, emphasising the shared identity or shared schematic representations between the self and others. This idea of inclusion suggests perceiving the self in the other, similar to the idea of transportation in landscape photos when individuals picture themselves being in that depicted landscape (Gibson, 2014). Hence, it is reasonable to consider that the separation would impact the degree to which individuals view themselves as part of the landscape.

Physical proximity plays a role in determining the degree to which individuals include the landscape in their self-concept and how much they believe they are part of it. Prelinger (1959) argued that objects in proximal physical environment, such as dirt on the hands and furniture in this room, are more likely to be included in their self-concepts than objects in distant physical environment such as other rooms or the moon. Although the inclusion in the self seems to be stable and intentional, Belk (1988) addressed that self-extension also occurs involuntarily “though contamination via proximity and habituation to an object” (p. 160). For instance, sharing food in rituals or wearing second-hand clothes are symbolic way of sharing identities with other persons without prior acquaintance (Belk, 1988). Similarly, advertising messages that elicit narrative processing lead to consumers’ creation and enhancement of situational inclusion of the advertised brand in self-concept, as a result fitting their

personal experiences into the narratives (Escalas, 2004). Hence, it is reasonable to consider that a low vertical position would result in consumers perceiving themselves as part of the landscape, and vertical proximity with the physical environment (e.g., trees, rivers, forest, etc.) would enhance the likelihood of including the physical environment in one's self. In contrast, a high vertical position would lead to a perception of separation from the physical environment, reducing the likelihood of including objects in the depicted physical environment due to separation and detachment. On this basis, this inclusion in the self can influence psychological distance and construal level in several ways.

3.2.3.2 Inclusion in the self and construal level

- ***Inclusion in the self and psychological distance***

Inclusion in the self is related to psychological distance and subsequent construal level for two main reasons. First, individuals who have a high degree of inclusion of objects in the self are more attend to immediate environment as they are more sensitive to the maintenance of relationships with these objects. For instance, it is difficult for people to accept the loss of possessions that have been incorporated in their self-concept, as it resembles the grieving of loss of a part of self (Belk, 1988). Hence, maintaining and preserving relationship harmony requires paying close attention to the immediate environment regarding "here" and "now". The attention to "here" and "now" is likely to prompt a low-level construal as it is temporally and spatially close to an individual. In support of this argument, Spassova and Lee (2013) revealed that independent individuals tend to use representations at high-level construal, compared with interdependent individuals. This is because interdependent individuals understand self-concepts through understanding the group identity to which they belong. As such, protecting their self-concept requires protecting and maintaining their group identity and interpersonal relationships, which in turn leads

them to focus on the immediate environment regarding "now" and "here", indicating low-level construals. Likewise, when vertical position is low, consumers may perceive themselves as being more immersed in the physical environment depicted in landscape photos. In this case, what happens within that physical environment around them become more impactful than when they are separated from it (mentally or physically). Thus, the perceived low vertical position might decrease their construal level by focusing on "here" and "now" of the immediate environment.

- ***Inclusion in the self and retrieval of cognitive representation***

The greater the degree of inclusion of objects in the self, the more direct the retrieval of cognitive representations of "self-like" objects, leading to a low construal level. When individual include objects in their self-concept, the cognitive representations of the self and the objects contain common elements, and the schematic representation may overlap with many shared qualities. For instance, consumers associate brand-related schemas (e.g., this brand is sportive) with their self-concept, so their self-schema overlaps with representations of brand-related schemas (e.g., the brand and I are both sportive) (Sprott et al., 2009). Similarly, a close other may be included as a part of the self-concept and share the same schematic representations (e.g., my friend and I are both sportive) (Aron et al., 1992; Aron et al., 1991; Cialdini et al., 1997). As a result, experiences with the objects that have more shared schematic representations become more retrievable and direct. That is, it is easier and more information are available when individuals to understand an included object (Markus, 1977). According to construal level theory, when an object is removed from direct experience, people typically have less available and reliable information about it, leading to the formation of a more abstract and schematic representation (high-level) of the object (Liberman & Förster, 2009; Trope & Liberman, 2010; Trope et al., 2007). This was evidenced in Liviatan et al. (2008), in which people exhibit a low-level of construal when they include others more in their

self-concept (or they believe they are more a part of the others) because the cognitive representations of the close others are more retrievable and direct, leading to a closer psychological distance (e.g., social distance) with the others. Hence, it is reasonable to consider that if consumers include the physical environment more in the self, or they believe they are more of a part of the physical environment and vice versa, they should exhibit low level of construal as their experience with the included physical environment becomes more direct.

Above all, a low (vs. high) vertical position in landscape photos can make the depicted physical environment seem more immediate or "self-like" because people may include more of the physical environment in their self-concept. As a result, the landscape photos depicting a low vertical position are more likely to elicit a low level of mental construal, compared with landscape photos depicting a high vertical position (See Figure 14). Therefore, this thesis proposes:

- ***H1: Perceived vertical position in landscape photos is positively related to consumers' construal level.***

- ***H2: The effect of perceived vertical position in landscape photos on consumers' construal level is mediated by the inclusion in the self.***

3.3 Impact of congruence in construal level

The congruence in construal levels between vertical position and another construal-representing factor (either dispositional or situational) is evident in several domains: feeling right, processing fluency, and mutually eliciting nature between construal-representing factors.

Congruence effect is believed to stem from "feeling right", a subjective experience that leads people to feel correct or proper (Cesario et al., 2004; Higgins et al., 2003; Monahan & Romero, 2020; Wadhwa & Zhang, 2014). "Feeling right"

occurs when the representation of the stimulus is congruent with customers' expectation of what is the right representation of the stimulus. And the "feeling right" creates a positive affective feeling that transfers to the stimulus (e.g., advertising messages) (Avnet et al., 2013; Higgins et al., 2003). For instance, promotion-focus (vs. prevention-focus) participants who view messages using an eager style (vs. vigilant style) have more positive attitudes toward a message's topic and greater behavioural intentions to comply with its recommendation than when promotion-focus (vs. prevention-focus) participants view messages in a vigilant style (vs. eager style). This is because the eager style conveys premotion and vigilant style conveys prevention (Cesario & Higgins, 2008). Similarly, the writing direction (vertical vs. horizontal) in advertising that fits with Chinese customers' perceptions of brands (antique/traditional vs. modern/contemporary) increase advertising persuasiveness because Chinese customers are accustomed to associate vertical writing with antique/traditional brand (Deng & Li, 2019). It is logical to assume that when the construal level of the vertical position in an advertising photo is congruent with the dispositional construal level of consumers, the advertising photo will be more impactful in persuasion process. While "feeling right" appears to be an affective response, at a cognitive level, Thompson and Hamilton (2006) also suggest that when the consumers' inherent processing mode is compatible with the processing mode required to process advertisement, advertising effectiveness increases through enhanced processing fluency.

At a cognitive level, the congruence effect is believed to be driven by processing fluency. Processing fluency is a subjective experience of the speed, accuracy, ease, and smoothness of ongoing cognitive processes that significantly improves judgments and evaluations of the fluency-eliciting stimuli (Alter et al., 2007; Landwehr & Eckmann, 2020). In empirical studies, unlike "feeing right," which seems to occur when the external stimulus is congruent with consumers' internal mindset, processing fluency can occur in any congruence scenarios, that is, message-people and message-

message congruences. For instance, in a message-people congruence between promotion-focus individuals (vs. prevention-focus) and gain-framed appeal (vs. loss-framed appeal), the congruence leads to a more fluent processing of the message, which in turn contribute to the enhanced message persuasiveness (Lee & Aaker, 2004). Similarly, Thompson and Hamilton (2006) found that when consumers' mode of information processing (imagery vs. analytical processing) is compatible with the processing mode required to process advertising information (imagery cue vs. analytical cue), the congruence improves information processability, which subsequently enhances advertising effectiveness. In addition, Lee et al. (2010) showed that congruence between customers' regulatory focus and the regulatory focus induced by an advertisement increases processing fluency, which subsequently enhances brand attitude. In addition to the congruence between message and consumers' internal mindset, processing fluency can also occur when external stimuli are congruent (i.e. message-message congruent). For instance, Roose et al. (2019) revealed that when the construal level induced by advertising photos is congruent with the construal level induced by advertising verbal claims, the congruence in construal levels among advertising elements enhances processing fluency, which in turn leads to enhanced advertisement attractiveness, attitude, and product usage intention.

The relationship between vertical position and another construal-representing factor should be mutually eliciting and implicitly associated. Literature in CLT suggests that construal-representing factors appear to have bidirectional causal relationships, which is due to the implicit associations between factors at the same level of construal. For instance, people are believed to understand temporal distance, such as time, via spatial distance, such as the intervals between clock dials. People can also understand social distance, such as interpersonal closeness, via spatial distance, such as living distance between individuals. Hence, priming participants with spatial distance leads to greater perceived temporal and social distances, and priming temporal and social distances also lead to greater perceived spatial distance (Zhang &

Wang, 2009). In a similar vein, when people take an actor's perspective, they focus on "how" the action can be done, while when people take an observer's perspective, they focus on "why" the action is taken. Thus, visually priming participants to take an actor's perceptive (vs. observer's) decrease construal level as they attend to "how" aspects of the action (vs. "why" aspects of the action). Furthermore, priming participants' high construal level (vs. low) leads to more identification with an observer's perspective (vs. actor's) (Libby et al., 2009), indicating a mutually eliciting attribute. As Zhao and Xie (2011) argued, when two construal-representing factors show implicit associations, congruence effect should emerge. Hence, it is reasonable to consider that when landscape photos evoke high (vs. low) construal level, consumers should be more accustomed to process and prefer factors that are represented at high (vs. low) level of construal. Alternatively, when consumers are high in dispositional construal level (vs. low), they should be more inclined to process and prefer landscape photos that could evoke high (vs. low) level of construal.

These three congruence assumptions suggest that congruence in construal levels between landscape photos and another construal-representing factor should increases overall attitude and behavioural intentions towards the advertised product. The "feeling right", processing fluency, and mutually eliciting nature that enable the congruence effect encompasses both affective and cognitive components that are believed to form overall attitude (Eagly & Chaiken, 1993). In addition, consumers' attitude towards the product is considered a stable and enduring predisposition, which predicts multiple positively-valenced behavioural intentions with respect to the advertised product, such as the intention to purchase (Fishbein & Ajzen, 1977; Lavidge & Steiner, 1961; Mitchell & Olson, 1981). Consistent with this prediction, empirical studies on congruence in construal level consistently observed the enhanced attitudes and behavioural intentions. For example, congruence in construal level promotes consumers' attitude towards product and brand, as well as purchase intention (Lee et al., 2010; Roose et al., 2019; Ryoo et al., 2017; Tangari & Smith,

2012), attitude towards advertised hotels and destinations (Kim et al., 2016; Wang & Lehto, 2019), and recycling behaviour (White et al. 2011). Thus, in line with the findings of previous studies, this thesis proposes:

- ***H3a: Advertisements using landscape photos that evoke the same (vs. different) level of construal with a consumer factor increase consumers' overall attitude towards the advertised product.***

- ***H3b: Advertisements using landscape photos that evoke the same (vs. different) level of construal with a consumer factor increase consumers' behavioural intention towards the advertised product.***

- ***H4a: Advertisements combining landscape photos and another advertising element that evoke the same (vs. different) levels of construal increase consumers' overall attitude towards the advertised product.***

- ***H4b: Advertisements combining landscape photos and another advertising element that evoke the same (vs. different) levels of construal consumers' increase behavioural intention towards the advertised product.***

3.4 Research models

The two-block research models (Figure 14 and Figure 15) align with the paradigm that utilizes the congruence framework to explain advertising effectiveness or message persuasiveness (e.g., Aggarwal and Zhao (2015); Biliciler et al. (2021); Roose et al. (2019); Spassova and Lee (2013)).

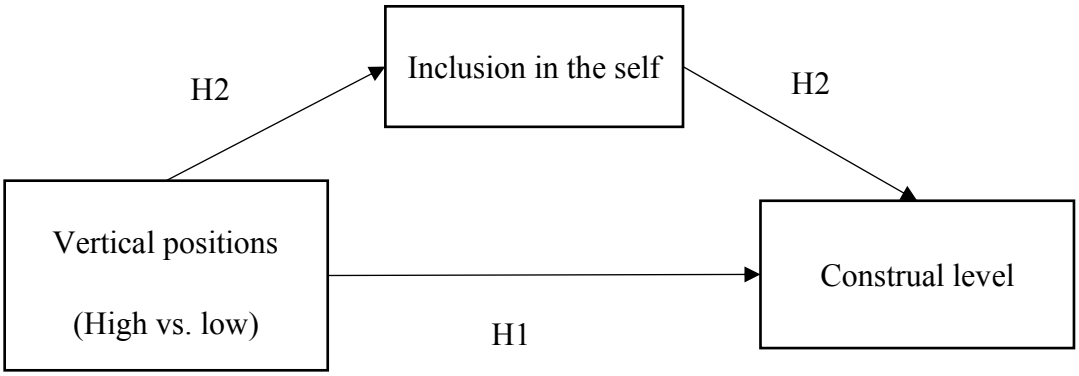


Figure 14: Research model 1 - the effect of vertical position on construal level via inclusion in the self

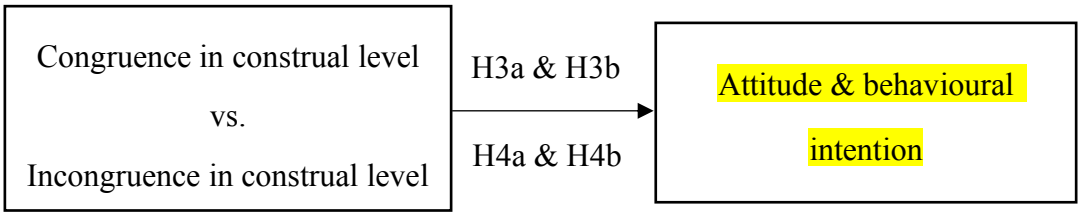


Figure 15: Research model 2 - the effect of congruence in construal level of vertical position and another construal-representing factor on advertising effectiveness, including attitude and behavioural intentions towards the advertised product.

3.5 Chapter conclusion

This chapter presents theoretical foundations for testable hypotheses that answer research questions. It starts by discussing how the theory of mental simulation bridges human visual perceptions and cognitions, such as construal level. The chapter then analyses three potential routes for explaining construal level, including conceptual level, perceptual level, and the four dimensions of psychological distance. The theory of metaphorical associations (conceptual level) and theory of perceptual scope (perceptual level) are critically evaluated and refuted as potential explanations for the effect of vertical position on construal level.

This chapter then focuses on the egocentric feature of psychological distance from the perspective of self-concept to explain the effect of perceived vertical position on construal level. As a result, the following two hypothesis are proposed to answer RQ2 and RQ3:

H1: Perceived vertical position in landscape photos is positively related to consumers' construal level.

H2: The effect of perceived vertical position in landscape photos on consumers' construal level is mediated by the inclusion in the self.

In terms of advertising effectiveness, this chapter argues that "feeing right", processing fluency, and mutually eliciting nature between construal-representing factors are three empirical pillars that explain the emergence of congruence effect when construal levels are aligned. Using the framework of congruence in construal level, this thesis addresses RQ5 with the following hypotheses:

H3a: Advertisements using landscape photos that evoke the same (vs. different) level of construal with a consumer factor increase consumers' overall attitude towards the advertised product.

H3b: Advertisements using landscape photos that evoke the same (vs. different) level of construal with a consumer factor increase consumers' behavioural intention towards the advertised product.

H4a: Advertisements combining landscape photos and another advertising element that evoke the same (vs. different) levels of construal increase consumers' overall attitude towards the advertised product.

H4b: Advertisements combining landscape photos and another advertising element that evoke the same (vs. different) levels of construal consumers' increase behavioural intention towards the advertised product.

This chapter visualised hypotheses with two research models that shows the two-block paradigm when the framework of congruence is adopted.

Having presented the theoretical underpinnings and hypotheses, the next chapter will delve into the philosophical standpoint and details of the methodological approaches to test hypotheses and answer research questions.

Chapter 4: Research Philosophy and Overall Research Design

Chapter Content

4.1 Chapter introduction

This chapter outlines the philosophical standpoint and methodological approaches of this thesis in an effort to answer the research questions.

Section 3.2 introduces the research paradigm of this thesis. Specifically, this section presents main ontological and epistemological assumptions on the objectivism-subjectivism spectrum and the corresponding research philosophies. Four leading research philosophy stances – constructivism, positivism, critical realism, and pragmatism – are reviewed on their ontological and epistemological assumptions and methodological choices. Most importantly, this section informs that positivist research paradigm guides the development of this thesis.

Section 3.3 provides an overview of quantitative research design to approach the research enquiries, which is consistent with the positivist research paradigm.

Section 3.4 presents the methodology for a quantitative content analysis with the purpose of answering RQ1 and RQ4.

Section 3.5 presents the methodology for experimental study with the purpose of answering RQ2, RQ3, and RQ5.

4.2 Research paradigm

The approach a researcher takes to address research enquiry is guided by an appropriate research paradigm, which is comprised of a set of practices, beliefs, and assumptions. Research paradigms help to define the research philosophy of a research project, and establish common beliefs and shared agreements between researchers regarding how problems should be understood and addressed (Kuhn, 1970). In essence, within the same research paradigm, researchers are guided by the same rules and standards of scientific practice. The research paradigm encompasses ontology, epistemology, and methodology, with ontology and epistemology forming the research philosophy, which in turn guides to the methodology.

4.2.1 Ontology

Ontology deals with the nature of reality and the assumptions made about that reality (Blaikie & Priest, 2019). Ontological assumptions shape the way in which we view and study research objects. From an objectivist perspective, which embraces the extreme form of realism, the social realities are considered external to researchers and exist as physical entities in the natural world. In other words, social entities exist independently of how they are thought of, labelled, or even recognised (Saunders et al., 2016). On the other hand, subjectivism, which embraces the extreme form of nominalism, asserts that there is no underlying reality to the social world because the

order and structures of social phenomena are created by us as researchers and actors in the society (Saunders et al., 2016). This means that there may be multiple realities, as different people perceive reality differently (Burell & Morgan, 1979).

4.2.2 Epistemology

Epistemology deals with assumptions about knowledge, what constitutes acceptable, valid, and legitimate knowledge, and how we can communicate knowledge to others (Burell & Morgan, 1979). Different types of data, from numerical to textual, and visual, as well as factors, interpretations, narratives, stories etc. are considered legitimate knowledge (Saunders et al., 2016). Researchers adopt different epistemological assumptions in their research so that knowledge can be communicated. Like ontology, epistemological assumptions also lie on a spectrum between objectivism and subjectivism. From and objectivist perspective, objectivists seek to discover the truth about the social world through the medium of observable, measurable facts, and draw law-like generalisations about the social reality (Saunders et al., 2016). They strive to keep their research free of personal values to avoid bias in their findings. On the other hand, from a subjectivist perspective, subjectivist researchers interpret different opinions and narratives to understand the different social realities of different social actors. Thus, subjectivist researchers cannot detach themselves from the data as they actively reflect on, question, and incorporate their own values (Cunliffe, 2003).

The next section will introduce main research philosophies that reflect the combinations of ontological and epistemological assumptions, as well as the corresponding methodological choices.

4.2.3 Research philosophy

Research philosophy refers to a system of beliefs and assumptions about the development of knowledge that guide actions (Guba & Lincoln, 1990). Philosophical

approaches help researchers decide which approach to use to answer their research questions (Saunders et al., 2016). Researchers often embrace qualitative, quantitative, or mixed-methods approaches based on the common beliefs they hold (Creswell, 2003). Throughout the research process, researchers make a series of assumptions, including assumptions about the nature of the reality (i.e. ontology) and assumptions about the knowledge (i.e. epistemology) (Burell & Morgan, 1979). Different researchers may hold different views on the nature of truth and knowledge and its acquisition (Cohen et al., 2007), but a consistent set of assumptions constitutes a sound research philosophy that underpins methodological choices (Crotty, 1998; Saunders et al., 2016). The following sections will highlight four predominant philosophical worldviews distinguished by their variations in ontological and epistemological assumptions: constructivism, positivism, critical realism, and pragmatism (Saunders et al., 2016).

- ***Constructivism***

The constructivist worldview recognises that humans are different from physical phenomena as they create meanings. Constructivists aim to understand the world of human experience by exploring how individuals develop subjective meanings towards certain objects or things (Cohen et al., 2007; Creswell, 2003). The worldview holds that reality is socially constructed, and that there are multiple and different social realities (Mertens, 2009).

In order to understand the social realities, the constructivist researchers focus on interpreting the meaning that others hold about reality through language, interactions, experiences, texts, stories, images, symbols, conversations, etc. (Creswell, 2003). This meaning-making process is considered subjective. The goal is to create a richer understanding and interpretation of social worlds and contexts so that new theories can be generated and built.

Constructivist researchers typically use inductive approaches and qualitative methods of analysis to build theories. Inductive approaches normally require researchers to conduct in-depth investigations, such as interview, observation, or document study to develop theories (Saunders et al., 2016).

- ***Positivism***

The positivist worldview is associated with the philosophical stance of the natural scientist, which entails studying observable social reality and producing law-like generalisations similar to those in the physical and natural sciences (Saunders et al., 2016). Contrary to the constructivists, positivists hold the ontological assumption that there is only one reality and the physical world operates according to general laws (Macionis, 2011). Positivists also hold a deterministic philosophy that causes determine outcomes according to the laws (Creswell, 2003).

Epistemologically, positivist researchers believe that fact should not be influenced by human interpretation or bias. To achieve this, they attempt to remain detached from the data to avoid any bias, and only consider phenomena that be observed and measured to produce creditable and meaningful data (Crotty, 1998). Positivist researchers then seek relationships in data to create law-like generalisations (Saunders et al., 2016).

Positivist researchers typically rely on deductive approaches to conduct research, which involves adapting existing theory to develop testable hypotheses. The process of data collection and analysis is objective, with the aid of existing measurement instruments. And quantitative methods of analysis are typically applied to accept or reject these hypotheses. The findings can then lead to the development of theories in ways of generalising or falsifying the existing ones (Saunders et al., 2016). However, positivist researchers can also start by engaging with the world to collect data and make observations prior to formulating and verifying hypotheses (Saunders et al., 2016).

- ***Critical realism***

The philosophy of critical realism lies between constructivism and positivism, and its focus is on explaining the observable events, in terms of the underlying structures of reality that shape them (Saunders et al., 2016). Ontologically, critical realism distinguishes between the "real" world and the "observable" world, recognising that what we experience are some of the manifestations of the things in the real world, rather than the actual things themselves. This means that critical realist researchers should focus on providing an explanation for observable world by looking for the underlying causes and mechanism through which deep social structures shape everyday life (Bhaskar, 2013). Hence, much critical realist research takes the form of in-depth historical analysis of social and organisational structures and how they have changed over time (Reed, 2005).

Epistemologically, critical realist researchers acknowledge that knowledge is historically situated and the social facts are social constructions agreed upon by people, rather than existing independently (Bhaskar, 2013). As a result, critical realist researchers often adopt retroductive/abduction approaches, moving back and forth between empirical evidence and literature. Hence, mixed-methods (quantitative and qualitative research methods) are typically used, as causality is not necessarily residing in statistical correlations and quantitative methods, but instead a range of methods are acceptable (Reed, 2005).

- ***Pragmatism***

The philosophies mentioned above hold different ontological and epistemological assumptions, shaping different ways of perceiving the world and conducting research. However, the pragmatic worldview focuses on making difference in organisational practice without committing to any specific system of philosophy and reality (Creswell, 2003; Saunders et al., 2016).

The pragmatic worldview asserts that concepts are only relevant to support action (Kelemen & Rumens, 2008). In other words, pragmatists believe that practical results are the most important aspect, and the research problems determine the research philosophy (Saunders et al., 2016). Pragmatists are concerned with finding solutions to problems and aim to contribute practical solutions to inform future practice (Patton, 1990; Saunders et al., 2016). Thus, pragmatists focus on solving research problems without restrictions on methods, techniques, and procedures as long as the choices meet their research goals (Rossman & Wilson, 1985).

As a result, pragmatist researchers typically adopt mix-methods (e.g., quantitative, and qualitative) to solve research problem with the emphasis on practical solutions and outcomes (Saunders et al., 2016).

4.2.4 This thesis: positivist research paradigm

This thesis adopts the positivist research paradigm for several reasons:

First, the objective ontological and epistemological assumptions guide the selection of the positivist research paradigm. The research is based on the objective ontological assumption that there is a single reality that can be observed and measured, and that researchers can be detached from this reality. The relevant studies on stylistic properties do not consider that the effect of stylistic properties or visual stimuli on cognition or advertising effectiveness is socially constructed (e.g., Aggarwal and Zhao (2015); Jami (2019); Slepian et al. (2015)). In line with the relevant studies (Table 1, Table 2, and Table 3), this thesis also holds an objective view that there exists a single reality of stylistic property that can be observed and measured while researchers are detached from the reality.

Second, epistemologically, consumers' cognitive responses and advertising effectiveness are legitimate knowledge that can be observed and measured with the help of existing measurement instruments. Studies on advertising effectiveness often

adopt an objective perspective to uncover advertising effectiveness through the measurable facts while keeping the researcher's own value detached from the process of data collection and analysis (e.g., Bhat et al. (2002); Lavidge and Steiner (1961); McAlister et al. (2016)). The constructs proposed in this thesis can be measured using numeric and objective instruments adopted from the existing literature, which enables the measurement of objective reality to verify theories (Phillips & Burbules, 2000). Given the objective ontological and epistemological assumptions, this thesis adopts the positivist research paradigm (Saunders et al., 2016).

Third, the literature review shows that this thesis is interested in establishing causal relationships between vertical positions, construal level, and advertising effectiveness. The relationships will be underpinned by theories such as mental simulation and construal level theory, formulating testable hypotheses to answer the research questions. This motive requires adopting quantitative research methods to accept or reject the hypotheses, featuring one of the characteristics of the positivist worldview (Saunders et al., 2016).

Last, the research gaps suggest a deterministic philosophy that addresses the causes of the conflicting outcomes. While existing literature has proposed several factors (i.e. perceptual scope and conceptual metaphor) that can potentially influence construal level, they have not been tested. This thesis seeks to use inclusion in the self to explain the causal relationship between perceived vertical position and construal level according to the theories (Creswell, 2003). The causal relationships that this thesis intends to investigate are aligned with the positivistic research paradigm, which requires using quantitative methods (Creswell, 2003; Saunders et al., 2016).

4.3 Quantitative research designs

This thesis adheres to the positivist research paradigm and employs a predominantly **quantitative approach using deductive reasoning** (Saunders et al.,

2016). The approach provides a specific direction for the procedures involved in quantitative methods. And quantitative research is often associated with the deductive approach for testing hypothesis using numeric data (Saunders et al., 2016). To address RQ1 and RQ4, the frequency and prevalence of proposed vertical position and construal-representing factors need to be investigated. This process helps to validate the research construct. And it is a common practices in business research before proceeding with hypothesis testing (e.g., Gunia and Levine (2019); Reich and Pittman (2020); To and Patrick (2021)). Hence, the study design consists of two stages:

1. Quantitative content analysis, which involves structured observations to quantify and validate the prevalence of the proposed vertical position and accompanying construal-representing factors, and to answer RQ1 and RQ4.
2. Experiments, which will address the causal relationships between proposed vertical position, construal level, and advertising effectiveness, and to answer RQ2, RQ3, and RQ5 through hypotheses testing.

4.3.1 Quantitative content analysis

Content analysis is considered the most appropriate research method to analyse social phenomena in a replicable and systematic manner (Bryman & Bell, 2011). Content generally refers to a variety of forms of textual, visual, or aural materials, and the primary aim of content analysis is to determine the presence and frequencies of certain words, themes, or concepts within the content (Riff et al., 2014). And content analysis involves systematic identifying, reading, observing patterns, themes, and trends within the data to gain insights into the presence of meaningful pieces of content and phenomena of interest. The analysis is often guided by a predefined codebook, which lists a set of standardised criteria to identify the codes within the content (Krippendorff, 2018). Through systematic observation, counting and classification, content analysis can provide insight into the prevalence of certain elements, themes, or topics, which indicates the level of their impacts in the relevant

research context (Coe & Scacco, 2017; Riff et al., 2014). Therefore, adoping content analysis can help to validate the presence and significance of vertical position and accompanying construal-representing factors in advertising practices.

Content analysis broadly encompasses two distinct approaches: quantitative content analysis and qualitative content analysis. Qualitative content analysis focuses on understanding the underlying meanings, themes, and patterns within the data. Researchers employing this method often use techniques such as coding and thematic analysis to identify and interpret subjective elements like emotions, opinions, and perspectives. It emphasises latent interpretations. Hence, qualitative content analysis is predominantly guided by an interpretivist worldview (Mayring, 2004). In contrast, quantitative content analysis involves counting and categorising specific elements within the data to uncover trends, frequencies, and relationships. This approach relies on numerical data and statistical methods to draw conclusions about the content being analysed. While qualitative content analysis emphasises depth and interpretation, quantitative content analysis focuses on manifest meanings and prioritises objectivity and measurement, which takes a positivist worldview (Coe & Scacco, 2017).

Aligned with the positivist research paradigm and deductive reasoning, this thesis adopts a **quantitative content analysis approach** to investigate the presence and prevalence of vertical position in landscape photos and construal-representing factors that appear in combination with these photos. The purpose of quantitative content analysis is to identify numerical trends and patterns of a particular topic within the content and to determine the presence and significance of these topics (i.e. frequency ranking). This method requires systematic observation and quantification of patterns in order to make numerical generalisations about the patterns therein (Coe & Scacco, 2017; Riff et al., 2014).

The choice of using quantitative content analysis is also informed by the differentiations identified in the literature review among stylistic properties and the characteristics of possible construal-representing factors. These factors are objective

and directly observable from landscape photos and textual messages in advertisements. Following the guidelines of quantitative content analysis by Coe and Scacco (2017) and Krippendorff (2018), and drawing from visual content analysis performed in previous studies (e.g., To and Patrick (2021)), this quantitative content analysis design includes steps for **unitising, content sampling, coding, and reliability checks.**

4.3.1.1 Unitising

Unitising isolates the text or portion of text that is being used in a particular component of the analysis. Krippendorff (2018) distinguishes two primary kinds of units: sampling unites and recording/coding units. Sampling units normally follow natural breaks of some kind. In this thesis, the sampling units will be divided into visual content (i.e. landscape photos) and textual content (i.e. any textual materials accompanying the landscape photos). This is because advertisements commonly combine visual elements (e.g., a landscape photo) with one or more advertising elements, such as textual slogans, claims, call for actions, etc. (Peracchio & Meyers-Levy, 2005). Coding units identify the specific portion of text that will be assessed to trigger a given code. In this study, single landscape photo and a single word will be considered a coding unit.

4.3.1.2 Quantitative content analysis – Purposive sampling

To conduct quantitative content analysis, this thesis will use a sample to represent the advertising reality. Firstly, it is impractical for this thesis to collect data from every single advertisement due to the massive size of the advertisements released throughout the history, budget constraints, and time constraints. These three concerns suggest collecting data from a sample that represents the advertising reality (Saunders et al., 2016). Likewise, sampling is also suggested for conducting content analysis (Coe & Scacco, 2017; Krippendorff, 2018).

Non-probability sampling is chosen as the sampling frame is unattainable. A sample frame is **a complete list of all the individual cases (e.g., every single advertisement) in the target population (e.g., all advertisements throughout history) from which the sample will be drawn so that the probability of each case is known** (Babbie, 2020; Saunders et al., 2016). The sample frame is unattainable because of the massive target population and possible problems such as incomplete individual databases, inaccurate databases, and outdated databases hinder the adoption of a suitable sample frame (Creswell, 2003; Edwards et al., 2007; Malhotra et al., 1996; Saunders et al., 2016). Without a complete and accurate sample frame, the content analysis will have to select a non-probability sampling method.

The aim of content analysis is to discover the presence and prevalence of vertical position in advertisement using landscape photos, as well as the presence and prevalence of construal-representing factor in combination with these landscape photos. Following the sampling logic proposed by Saunders et al. (2016), the quantitative content analysis in this thesis relies on purposive sampling for several reasons:

- First, the sample content does not have the agency to volunteer, making snowball sampling and self-selection sampling invalid (Saunders et al., 2016).
- Second, the RQ1 and RQ4 do not require statistical inferences about the characteristics of the target population (e.g., which year do the advertisements were released or specific types of landscape sceneries). Hence, quota sampling is redundant (Saunders et al., 2016).
- 78% of the studies in content analysis rely on convenience or purposive samples (Coe & Scacco, 2017; Riffe & Freitag, 1997). Purposive sampling, which relies on the researcher's judgement, is preferred over convenience sampling as it selects information-rich cases and yields the

best knowledge concerning the research topic (Elo et al., 2014; Saunders et al., 2016).

4.3.1.3 Coding procedures

In quantitative content analysis, coding involves following instructions to identify specific features in the content, which can be done by humans or computers. To standardise the coding process, researchers need to create a codebook with a set of codes outlining features, definitions, examples, and rules for coding. Codes are then assigned to corresponding content during the coding process for later quantification or categorisation (Coe & Scacco, 2017).

According to Krippendorff (2018), codes should be exhaustive and mutually exclusive. Exhaustiveness means that the codes should cover nearly all content relevant to the category, while mutual exclusiveness means that the codes should not overlap with each other. Additionally, for each category (i.e. high vs. low vertical positions), the coding instructions should clearly define the cut-off point at which the code will be assigned.

After unitisation and sampling, the coding process in quantitative content analysis is as follows:

1. Develop codebook: A codebook presents a set of predefined codes that will be used to classify the units of analysis. The codebook includes clear definitions and guidelines for each code to ensure consistency in coding across coders.
2. Train coders: Multiple coders will be recruited and they will undergo training to familiarise themselves with the codebook and coding procedures.
3. Coding process:
    - Coders systematically go through the content, assigning codes to each unit of analysis according to the predefined codes in the codebook.

Manual coding will be conducted using pen and paper or spreadsheet software.

- To ensure consistency and accuracy in coding, coders will actively check during the coding process. Interrater reliability will be used to assess if coders agree with the coding; any conflicts will be resolved between coders.

4. Analysing codes: Researchers will analyse the coded data to identify patterns and frequencies among the coded categories. This may involve statistical analyses such as frequency tables or cross-tabulations.
5. Data interpretation: Researchers will interpret the findings in relation to the research questions and objectives.

Overall, the coding process in quantitative content analysis involves systematic classification of content using predefined codes, followed by rigorous quality control and analysis to draw meaningful insights and conclusions.

4.3.1.4 Interrater reliability

Statistical analysis is adopted to assess the reliability of coding process. Interrater reliability is a measure of the agreement between two or more coders in assigning content to the corresponding code. In other words, a high interrater reliability indicates that the codes and coding process are accurate.

The conventional Krippendorff's alpha (α) is used to estimate interrater reliability in content analysis, An α value above 0.7 is considered reliable, according to Hayes and Krippendorff (2007).

4.3.2 Experiments

Experimental research strategy is the most appropriate approach to answer the research questions RQ2, RQ3, and RQ5 through hypothesis testing. Among the

available quantitative research designs, experiment and survey are predominantly two quantitative strategies to investigate relationships between IV and DV through hypothesis testing.

Experiments are suitable for determining causal relationships and testing causation, as they isolate and manipulate independent variable to observe its effect on the dependent variable. This allows for the prediction of the effect and determination of whether the independent variable is the cause of the effect, indicating that changes in vertical position will cause changes in construal level (Creswell, 2003). On the other hand, surveys are used to analyse correlational relationships between variables (Saunders et al., 2016). A correlational relationship between vertical position and construal level does not automatically assure that changes in vertical position cause the change in construal level, as there may be other unknown or unexamined extraneous variable that are the actual causes.

This thesis adopts an experimental design because it aims to test causal relationships, rather than just correlational relationships. The examination of causal relationships is driven by inconclusive results of previous studies on the effects of vertical position on construal level (e.g., Aggarwal and Zhao (2015); Jami (2019); Slepian et al. (2015)). The existing literature suggest that further research is needed to operationalise the exact constructs and establish causal relationships between IVs and DVs to make meaningful inferences.

Correlational relationships established from survey studies are not sufficient to argue against the datable effects regarding the causal effect of vertical positions on construal level. In addition, this thesis also examines the congruence effect between vertical position and a construal-representing factor on advertising effectiveness. Previous research has indicated that the congruence effect can be operationalised in an experimental design, as both independent variables can be manipulated in two-way between-subject experimental design (e.g., Aggarwal and Zhao (2015); Chae et al. (2013); Roose et al. (2019)).

4.3.2.1 Between-subject design

This thesis adopts a between-subject true experimental design to test the hypotheses. In a between-subjects design, participants are assigned to different groups and comparisons are made between the groups (Keppel & Wickens, 2004). Each participant is exposed to only one level of the experimental treatments (e.g., either high or low level of vertical position), and the effect of each experimental treatment on an outcome or outcomes (e.g., construal level) can be calculated by making group comparisons (Vogt, 2011). The design with a single independent variable is called one-way between-subjects design. Analogously, between-subjects design can involves using two or more treatment variables to examine the independent and simultaneous effects (interactive effects) of these treatment variables on an outcome or outcomes of interest (e.g., construal level) (Vogt, 2011). And this design is called two-way (i.e. two independent variables) or factorial design (i.e. more than two independent variables).

The research questions of this thesis fit well with between-subjects design. RQ2 and RQ3 aim to test the effect of vertical position on construal level, and vertical position has at least two levels: low and high that can be assigned to participants. Also, the RQ5 concerns two independent variables (i.e. vertical position and a construal-representing factor), attempting to test their congruence effect on advertising effectiveness. The between-subjects research allows for the testing of each treatment separately and the effects of the variables in combination, as the construal-representing factor also has at least two levels (high and low).

4.3.2.2 Target population

The target population of this thesis include individuals aged 18 years and older who understand English. Most people around the world may have been exposed to advertisements or will be exposed to advertisements in the future. Thus, individuals

worldwide can be considered the target population of this thesis. Nonetheless, this thesis limits language use (i.e. English) primarily due to the context constraints where this thesis is conducted. In addition, this thesis excludes individuals under 18 due to ethical concerns in the advertising industry, as they are more likely to be categorised into vulnerable customers (e.g., financially vulnerable) (ASA, 2021).

4.3.2.3 Experiment – convenience sampling

To conduct experiments, this thesis will use a sample to represent the target population. Firstly, it is impractical for this thesis to collect census data from the entire target population because the target population consists of individuals above 18 years old who understand English. Hence, a sample will be used to represents the target population (Saunders et al., 2016). Secondly, the research questions can still be answered without addressing particular characteristics of the entire target population (e.g., age or gender). Consequently, there are no identified theoretical constraints stemming from the characteristics of respondents. On this basis, it is acceptable to use a sample to represent the target population (Saunders et al., 2016). Moreover, sampling is a valid method for most social science studies unless census data of the entire target population is attainable (Creswell, 2003; Saunders et al., 2016).

Non-probability sampling is chosen because a sampling frame is unattainable. The sample frame is a complete list of all the individual cases (e.g., every single participant) in the target population from which the sample will be drawn so that the probability of each case is known (Babbie, 2020; Saunders et al., 2016). Without a complete and accurate sample frame, the content analysis will have to select a non-probability sampling method.

Following the sampling logic suggested by Saunders et al. (2016), the experiment adopts non-probability convenience sampling for several reasons. First, the sample frame is unattainable without the access to the census data of the target population, which leads to the selection of non-probability sampling (Creswell, 2003; Edwards et

al., 2007; Malhotra et al., 1996; Saunders et al., 2016). Second, the research questions do not ask for making inferences about a particular characteristic of the target population. Also, there is no relevant quota variable available, as this thesis does not consider differences among groups of participants relevant to the research questions. Thus, it is unnecessary to use quota sampling for the experiment (Saunders et al., 2016). Third, the target population does not consist of individuals who are difficult to access or identify. Therefore, snowball sampling is unnecessary (Saunders et al., 2016). Fourth, this thesis mainly focuses on general public aged 18 and above and does not have a strict demographic focus for selecting the sample. On this basis, purposive sampling appears to be redundant in this case as it emphasise selecting individual cases that are information-rich (Saunders et al., 2016). Last, guided by the sampling logics, convenience sampling will be chosen as it is often characterised by ease of access and cost-saving (Saunders et al., 2016). Convenience sampling is also one of the most preferred sampling methods in recent publications such as *Journal of Marketing Research* (e.g., Kim and Lakshmanan (2021); Suher and Hoyer (2020)) and the *Journal of Marketing* (e.g., Hagen (2021); Rifkin et al. (2021)). As well as relevant literature (e.g., Aggarwal and Zhao (2015); Jami (2019)); Peracchio and Meyers-Levy (1992); Slepian et al. (2015); van Rompay et al. (2012); Yang et al. (2010)).

- ***Sample size decision***

Power analysis and methodological conventions determine the minimum sample size per experimental condition:

Power analysis

A power analysis determines the appropriate and the minimum number of participants in each group/condition. Before conducting an experiment, the

experimenter should set values for three factors to decide the minimum sample size: power, alpha, and effect size (Creswell, 2003; Lipsey & Aiken, 1990).

- The typical desired power in a study should exceed 0.8 (Cohen et al., 2007; Creswell, 2003). Having a power of 0.8 means that 80% of the time, the experiment would detect a statistically significant difference between the dependent variable(s) based on groups/conditions.
- The significance level (alpha) is the critical probability value determined ahead of a study, and the acceptable value is typically 0.05 (Cohen et al., 2007; Creswell, 2003; Lipsey & Aiken, 1990). An alpha of 0.05 means that the experimenter is willing to accept a 5% chance that the results are due to chance rather than the experimental procedure.
- When a difference is statistically significant, effect size determines whether the statistical significance is important and helpful in decision making (practical implications) (Lenth, 2001; Saunders et al., 2016). The larger the effect size, the stronger the relationship between the two variables. Based on the general guidelines developed by Cohen et al. (2007), effect size has a trivial effect (<0.1), a small effect (0.1-0.3), a moderate effect (0.3-0.5), and a large difference effect (>0.5). In line with common practices and effect size conventions suggested by Cohen et al. (2007), 0.5 will be used in this thesis as the estimated effect size to indicate a moderate to a large difference.

Above all, this thesis sets power = 0.8, alpha = 0.05, and effect size = 0.5 and adopts the G*power program developed by Faul et al. (2007) to calculate the required minimum sample size per experimental condition. Since between-subjects designs will be used in this thesis, Table 5 and Table 6 present power analysis results for common designs of one-way between-subjects designs (Table 5) and two-way between-subjects designs or factorial designs (Table 6). The power analysis results

provide a brief view of the minimum total sample size and sample size needed per condition.

According to Table 5 and Table 6, 17 is the largest number of samples per condition that can reach the desired power (0.8) in common between-subjects designs. Hence, setting 17 as the minimum samples size per condition should satisfy desired power (0.8) of experiments.

Table 5: Overview of minimum sample size in one-way between-subjects designs

Number of conditions	Sample size per condition	Total sample size
2	17	34
3	14	42
4	12	48
5	11	55
6	10	60
7	9	63
8	9	72
……	……	……

Table 6: Overview of minimum sample size in two-way and factorial designs

Number of conditions	Sample size per condition	Total sample size
4 (2X2)	9	34
6 (2X3)	7	42
8 (2X4)	7	49
8 (2X2X2)	5	34
9 (3X3)	6	54
10 (2X5)	6	54
12 (2X6)	5	58
12 (2X3X2)	4	43
12 (3X4)	6	62
……	……	……

Methodological conventions

In addition, there are several methodological conventions for deciding sample size in addition to the power analyses. Cohen et al. (2007) proposed sample size conventions that experimental methods normally require at least 15 samples per condition. Also, according to Gall et al. (1996), the sample size per condition should be no less than 20 in psychological experiments. According to Edgell and Noon (1984), a sample size of 30 should achieve normal distribution, which is crucial for making group comparison in data analysis.

Following the power analysis and methodological conventions, **a minimum of 40 participants per condition** will be recruited, as it exceeds the sample size of 17 per condition that reaches the desired power (0.8) and sample size conventions proposed by Cohen et al. (2007), Gall et al. (1996), and Edgell and Noon (1984).

- ***Recruiting participants***

Participants will be recruited from crowdsourcing platform Prolific (Prolific, 2021). Prolific is an online crowdsourcing panel, which provides a wide reach to potential participants worldwide. It supplies a sample pool of more than 120,000 active participants who are fully vetted and verified via a series of ID and ongoing checks, to make sure participants are real, unique, and AI-free (Prolific, n.d.). Prolific is able to reach 117,757 subjects who meet the inclusion criteria of this thesis (over 18 and fluent in English worldwide) (Prolific, 2021), indicating a wider reach and stronger representativeness compare with the author's personal connections. Most importantly, participants recruited from Prolific is also widely recognised in top marketing journals, such as *Journal of Marketing Research* (e.g., Suher and Hoyer (2020)) and the *Journal of Marketing* (e.g., Hagen (2021)).

Participant recruitment on Prolific follows several procedures (Prolific, 2024):

Creating a study on prolific:

Researchers start by posting the link to the study on the Prolific platform. Details about their research, including the purpose, methodology, and any requirements for participants are also provided.

Setting inclusion criteria:

Researchers set specific inclusion criteria for participants, such as age, location, language proficiency, or other demographic factors. For this thesis, the inclusion criteria are age 18 and above who comprehend English.

Setting compensation:

Researchers specify monetary compensation for participants based on the estimated time it takes to complete the study. The minimum payment is required by the Prolific platform due to the consideration of research ethics.

Approval by Prolific:

Once the study is created, it undergoes a review process by the Prolific team to ensure it meets ethical guidelines and platform standards.

Recruitment from participant pool:

Participants who meet the inclusion criteria see the study listed on their Prolific dashboard. They can choose to participate based on their interest and availability.

Informed consent:

Participants go through an informed consent process where they are provided with details about the study, including its purpose, procedures, risks, and benefits. They have the option to accept or decline participation.

Completion and payment:

Participants who complete the study in accordance with the instructions receive the agreed-upon compensation.

4.3.2.4 Data analysis

- ***Analysing tool***

SPSS v.27 will be used to perform data analysis. SPSS is a suitable statistical software designed for quantitative research such as experiments (Bryman & Cramer, 2004). Meanwhile, SPSS is suitable for analysing causal relationships between an independent variable(s) and a dependent variable(s) in social science research (Nie et al., 1975; Preacher & Hayes, 2004). Thus, this thesis uses SPSS to test the proposed hypotheses.

- ***Statistical testing***

Between-subjects experimental designs require making statistical comparisons between groups. Thus, the t-test and analysis of variance (ANOVA) can be used to make group comparisons on the mean value of a variable (Saunders et al., 2016). The t-test and ANOVA examine whether the group means of a variable differ from each other. The t-test is a type of inferential statistic used to determine if there is a significant difference between the means of two groups. Meanwhile, both the t-test and ANOVA are equivalent in comparing two groups. However, when there are more than two groups (two or more levels of the independent variable), ANOVA should be used to compare group means simultaneously. And the significance level remains at 0.05 (Cohen et al., 2007; Creswell, 2003; Lipsey & Aiken, 1990).

- ***Hypotheses testing***

Direction of changes

Based on the proposed hypotheses, a simple analysis based on the descriptive statistics (i.e. means and standard deviations) compares whether the direction of changes in the continuous dependent variable(s) aligns with the changes in the levels

of the independent variable(s). For between-subjects experimental designs with multiple groups/conditions, the groups are determined by the levels of the independent variable(s). Thus, if the changes in the continuous dependent variable(s) based on the groups are not aligned with the proposed hypotheses, then the hypotheses will be rejected straightaway.

If the changes in the continuous dependent variable(s) based on the groups are aligned with the proposed hypotheses. In this case, statistical significance testing follows to determine whether the changes in the dependent variable(s) are statistically significant. This step helps to ensure that any observed differences are not due to chance, providing statistical significance to support the hypotheses.

Statistical significance testing of changes in dependent variable(s)

The statistical significance testing calculates the p-value, which determines whether the observed changes reflect a pattern other than chance. The proposed hypothesis (i.e. alternative hypothesis) indicates an effect of IV on DV. And the null hypothesis is the opposite of the alternative hypothesis, indicating no effect between two variables (i.e. any observed effect has occurred by random chance). Thus, rejecting the null hypothesis means accepting the proposed hypothesis (i.e. alternative hypothesis). Meanwhile, the p-value calculates the probability that the null hypothesis is true. A conventional acceptable probability this thesis follows is 0.05, which means that the experimenter is willing to accept that there is a 5% chance of observed effects between variables have occurred by random chance (i.e. null hypothesis is true) (Cohen et al., 2007; Creswell, 2003; Lipsey & Aiken, 1990). Four analyses can perform the statistical significance testing to calculate the p-value. They are analysis of variance (ANOVA), analysis of covariance (ANCOVA), multivariate analysis of variance (MANOVA), and multivariate analysis of covariance (MANCOVA).

Analyses of statistical significance testing

ANOVA is the core component of all four analyses, and there are two main types of ANOVA. First, a one-way ANOVA compares groups of a single independent variable based on a single continuous dependent variable. Second, a two-way ANOVA compares groups formed by two or more independent variables based on a single continuous dependent variable. ANCOVA is an extension of ANOVA, as ANCOVA compares a dependent variable by both the main independent variable(s) and a covariate(s). And in data analysis, any uncontrolled control variable will be treated as a covariate. A MANOVA is an ANOVA with two or more dependent variables. Like ANOVA, MANOVA also has one-way and two-way types depending on the number of IV (Warne, 2014). MANCOVA, like MANOVA, tests the effect of levels of independent variables on the mean difference of two or more continuous dependent variables. Meanwhile, similar to the ANCOVA, MANCOVA seeks to rule out the potential effect of any uncontrolled control variable (i.e. covariate) during the process of making group comparisons.

ANOVA/ANCOVA/MANOVA/MANCOVA will then calculate the F statistics, which determines the p-value. If the p-value is less than 0.05, the proposed hypothesis will be accepted; if not, the proposed hypothesis will be rejected (Gravetter & Wallnau, 2009). In the individual studies, ANOVA, ANCOVA, MANOVA, or MANCOVA will be chosen based on the number of dependent variables and presence or absence of any covariate.

4.3.2.5 Ethical issues to anticipate

Research that involves collecting data from human being are required to consider ethical issues that may arise (Punch, 2005). Ethical issues, such as the authenticity of the research report and the issue of personal privacy, are addressed through the forms of internet data collection (Israel & Hay, 2006). Before conducting each study in this thesis, the author follows the code of ethics published by the American Psychological

Association (APA) (APA, 2017). Additionally, the author has acquired the ethical approval via the institutional ethics committee — the Ethics and Research Governance Online (ERGO) system in the University of Southampton (ERGO ID: 53631). ERGO provides full inspections and evaluations of an ethics form, a risk assessment form, and additional documentation such as consent forms, participant information sheets, and survey questionnaires (ERGO, 2020).

The data collected will be aggregated to guarantee anonymity of individual participants. And the data will be kept in an encrypted hard disk and cloud storage for ten years. After this period, the author will discard the data from both reservoirs so that the data will not fall into the third-party who might misappropriate it.

4.4 Overview of studies

	Phase 1: Construct validation	Phase 2: Focal relationship		Phase 3: Application	
Studies	**Study 1**	**Study 2**	**Study 3**	**Study 4(a)**	**Study 4(b)**
Purpose	Answer RQ1 and RQ4	Answer RQ2 and test H1	Answer RQ3 and test H2	Answer RQ5 and test H3a and H3b	Answer RQ5 and test H4a and H4b
Approach	Quantitative content analysis	Experiment	Experiment	Experiment	Experiment
Aims	– Investigate the presence and prevalence of vertical position appear in landscape photos and construal-representing factor in combination with landscape photos to empirically validate research constructs.	– Test the effect of vertical position on construal level to proceed with advertising effectiveness in subsequent studies	– Test the underlying mechanism that explains the effect of vertical position on construal level	Based on the findings of Study 1 and Study 2 – Investigate the congruence between vertical position and another dispositional construal factor on attitude and behavioural intention.	Based on the findings of Study 1 and Study 2 – Investigate the congruence between vertical position and another situational construal factor on attitude and behavioural intention.
Study Design	– Visual content analysis identifies vertical position in landscape photos – Textual content analysis identifies construal-representing factors in combination with landscape photos	– One-way between-subject experiment IV: perceived vertical position DV: construal level	– One-way between-subject experiment IV: perceived vertical position DV: construal level Mediator: inclusion of objects in self	– Two-way between-subject experiment IVs: perceived vertical position & construal representing factor identified from Study 1 DV: attitude and behavioural intention	– Two-way between-subject experiment IVs: perceived vertical position & construal representing factor identified from Study 1 DV: attitude and behavioural intention

Note: IV: independent variable, DV: dependent variable

Figure 16: Overview of the studies

As shown in Figure 16, this thesis consists of one quantitative content analysis and four experiments that showcase the progressive development of this thesis. In Phase 1, Study 1 is a quantitative content analysis that uses a visual content analysis to investigate the presence and prevalence of vertical position in landscape photos, thus validating the main research construct — perceived vertical position. Then, a textual content analysis validates the adoption of congruence in construal level by empirically identifying the presence and prevalence of construal-representing factors in combination with landscape photos.

Phase 2 informs the establishment of the focal relationship between vertical position and construal level. Two experiments, Study 2 and Study 3, test the effect of perceived vertical position on construal level. This focal relationship provides foundation for investigating how perceived vertical position influences advertising effectiveness in subsequent studies. Meanwhile, Study 3 investigates the underlying mechanism of this focal relationship.

Phase 3 provides managers and advertisers with practical applications of the focal relationship that informs how attitude and behavioural intention can be enhanced. Guided by the framework of congruence in construal level, Study 4 (a) and Study 4 (b) progress with the findings of the focal relationship (Study 2 and Study 3) and construal-representing factor discovered from Study 1 to examine if the congruence in construal level between these two factors enhances advertising effectiveness.

4.5 Chapter conclusion

This chapter provided rationales for deciding the positivism research philosophy and corresponding quantitative methodology of this thesis, which guides the pursuit of research enquiry. This chapter informed that positivism is suitable for answering research questions. Consequently, quantitative approaches should be adopted to

answer the research questions. This chapter then provided an overarching design of research regarding the research questions and study design.

This chapter established that this thesis would need to conduct a quantitative visual content analysis first to identify the perceived vertical position proposed in this thesis, answering RQ1. In addition, a quantitative textual content analysis facilitates the discovery of construal-representing factor in combination with landscape photos in advertisement, answering RQ4.

On this ground, this chapter suggested using experimental design to answer RQ2, RQ3, and RQ5. Specifically, between-subjects true experimental design will be adopted. This chapter also provided details and rationales for methodological choices in facilitating the experimental studies.

This chapter further provided methodology for data collection, data analysis, and cleared ethical concerns.

Having established the research philosophy and methodology for this thesis, this thesis proceeds to the empirical studies that build upon these foundations. Study 1 aims to examine the presence and prevalence of vertical position in landscape photos and construal-representing factors in advertisements. Following this, Study 2 and Study 3 seek to test the effect of vertical position on construal level and the underlying mechanism that drives this relationship. Lastly, Study 4(a) and Study 4(b) will investigate how perceived vertical position in landscape photos affect attitude and behavioural intention via congruence effect. This series of studies will contribute to a comprehensive understanding of the role of vertical position in shaping construal levels and their impact on advertising effectiveness.

Chapter 5: Study 1 – Presence and Prevalence of Vertical Position and Construal-representing Factors in Advertisements

Chapter Content

5.1 Chapter introduction

This chapter investigates the prevalence and presence of vertical position in landscape photos and construal-representing factors accompanying landscape photos. This chapter presents the research design and findings of Study 1, a quantitative content analysis aiming at answering RQ1: Is vertical position conceptualised in this thesis a prevalent stylistic property used in advertisements, compared with visual angle and verticality? and RQ4: What is the most prevalent construal-representing factor accompanying landscape photos in advertisements?

This chapter provides detailed study design and findings of the quantitative content analysis. Section 5.3 informs that this quantitative content analysis is situated in the context of destination advertising.

Section 5.4 formulates the two sets of codes for visual and textual content analysis.

Section 5.5 presents results of both visual content and textual content analysis. The content analysis discovered that the vertical position proposed in this thesis is the most prevalent stylistic property, compared with visual angle and verticality. This sections also shows that of conventional construal-representing factors, spatial distance cues are the most prevalent construal-representing factor in combination with landscape photos in the context of destination advertising.

Section 5.6 discusses the findings of visual and textual content analyses then informs the design and development of subsequent experimental studies.

Section 5.7 summarises this chapter.

5.2 Purpose

The purpose of Study 1 is to investigate the presence and prevalence of vertical position proposed in this thesis in comparison with visual angle and verticality. Study

1 also aims to identify the most prevalent construal-representing factor appearing in combination with landscape photos in advertising reality. Consequently, this study seeks to answer the following research questions:

RQ1: Is vertical position the most prevalent stylistic property of landscape photos, compared with visual angle and verticality?

RQ4: What is the most prevalent construal-representing factor(s) accompanying landscape photos in advertisements?

5.3 Unitising and content sampling

In line with overall methodology, single photo and a single word will be considered a coding unit. Additionally, following the purposive sampling, this study collects promotional photos and accompanying textual content (if any) from top tourism websites. The purposive sampling suggests that the sample should cater to the research purpose. Hence, landscape photos in tourism websites are selected. The decision is made due to several reasons:

First, literature on stylistic properties suggest that different product categories and contexts such as watches (Peracchio & Meyers-Levy, 2005), cereal and lipsticks (van Rompay et al., 2012), laptop (Kim et al., 2019), insurance (Meyers-Levy & Peracchio, 1996), bottled water (Roose et al., 2019), and gambling (Jami, 2019) do not seem to interfere with the impact of stylistic properties on consumers' responses. Similarly, the focus of this thesis is the impact of stylistic property per se, hence, this thesis follows the same trajectory of the literature of visual communication (Table 1) to only consider the context as the carrier to test the impact.

Secondly, the selection of the tourism industry is also guided by the purposive sampling method. To elaborate, a sample frame is not attainable due to the massive number of visuals that have been published throughout the entire advertising history. Hence, this study must follow the purposive sampling guidance of quantitative content

analysis (Coe & Scacco, 2017; Riffe & Freitag, 1997), which relies on the researcher's judgment to select information-rich cases and yield the best knowledge concerning the research topic, which is the landscape photos in the advertising context (Elo et al., 2014; Saunders et al., 2016). After initial searching for advertising using landscape photos on the Adforum (Adforum, n.d.), a database recommended by To & Patrick (2021), it is evident that the tourism context seems to offer one of the most abundant resources of landscape photos, which also aligns with the proposition that tourism advertisements appear to substantiate the prevalence of landscape photos in comparison to other advertising contexts (e.g., Garrod (2009); Isleifsson and Chartier (2011); Jia et al. (2021); Kim et al. (2014); Litvin and Mouri (2009); Urry and Larsen (2011)).

Therefore, this thesis proceeds with the selection of tourism context by collecting data from tourism websites. The selection of tourism websites is based on the industrial report by SimilarWeb (2022), which provides the ranking of the most visited travel and tourism websites worldwide as of January 2022. In addition, the author selected the top ten websites and then removed websites that contain less than five photos (i.e. uber.com) and websites powered by another website that is already on the list (e.g., only aa.com is excluded because its product page is powered by booking.com). For the visual content analysis, all the visuals/photos on the landing pages of these websites are crawled with the help of a Google Chrome extension named Fatkun Batch. This extension assists in downloading all pictures on the webpage (Chromewebstore, n.d.-a). For the textual content analysis, another Google Chrome extension named Web Scraper was employed. This extension enables the extraction of textual data (Chromewebstore, n.d.-b).

The photos and texts on the webpages were collected from 30th March 2022 to 2nd April 2022, and all the photos have accompanying texts. Table 7 shows the summary of a total of 870 photos and accompanying strings of textual contents obtained from the eight websites.

Table 7: Overview of the selected tourism website, website views, and dataset			
Websites	Website views of January 2022 (million)	Number of photos obtained	Number of textual contents obtained
Booking	385.9	515	515
TripAdvisor	114.8	171	171
Airbnb	82.3	45	45
Expedia	66	5	5
Vrbo	49.6	32	32
Southwest	48.8	47	47
Jalan	43.8	22	22
Agoda	38.8	33	33
Sum	830	870	870

5.4 Coding procedures

Following the coding procedures in quantitative content analysis (Coe & Scacco, 2017; Krippendorff, 2018), codebooks will be created to establish a set of codes outlining features, definitions, examples, and rules of stylistic properties and construal-representing cues. Coders will then assign codes to the corresponding units of content. This section explains detailed codes and the coding process for visual content to investigate the presence and prevalence of vertical position (stylistic property), and textual content to reveal the frequencies of construal-representing factors, respectively.

5.4.1 Coding of stylistic properties of landscape photos

5.4.1.1 Codebook

Before coding stylistic properties of landscape photos, landscape photos and non-landscape photos are firstly differentiated among all the photos extracted from the webpages. By definition in existing literature, landscape photos are photos that capture natural landscape (e.g., forest, seacoasts, etc.), man-made cityscapes (e.g., buildings), or both (e.g., a cottage on an island) (Hartmann & Apaolaza-Ibáñez, 2012; Jami, 2019; Roose et al., 2019), whereas non-landscape photos are photos featuring

other objects. Based on this classification, only landscape photos (i.e. visual content) will be coded in terms of the stylistic properties they possess, such as vertical position, visual angle, and verticality.

Each landscape photo will be coded on three categories of stylistic properties, including vertical positions, visual angles, and verticality. These codes of stylistic properties are derived from existing studies. For vertical position, photos depicting a high vertical position should give viewers the feelings of elevated from the surface of the ground (Jami, 2019). In contrast, photos depicting low vertical position should give viewers the feelings of being on or close to the surface of the ground or below it (Jami, 2019; Slepian et al., 2015). Visual angles are considered a dichotomous construct, including upward and downward (Roose et al., 2019), while eye-level visual angle indicates the absence of visual angle effect (Peracchio & Meyers-Levy, 1992). As for verticality, it is also a dichotomous construct, high verticality emerges when photo depict both high vertical position and downward visual angles, while low verticality emerges when photos depict both low vertical potions and upward visual angles.

Table 8 shows a list of photo examples of codes that align with the definition of each code.

5.4.1.2 Coding processes

Guided by the codebook, two independent coders who are unaware of the research purpose were recruited and trained to perform the coding. They were firstly instructed to read the definition of codes and view the photo examples of codes as shown in Table 8 to familiarise themselves with the codes. Coders were required to systematically go through each photo, assigning codes to each photo according to the codes. Manual coding will be involved, and coders will input the frequencies of codes in a spreadsheet on Microsoft Excel. Coders code the content independently without discussion before finishing coding.

In the initial phase of the coding process, the primary objective is to distinguish landscape photos from the entire collection of images extracted from webpages. Coders began by evaluating each photo to determine whether it features a landscape scenery, indicated by a simple binary categorisation: (1) Does this photo feature a landscape scenery? (Yes/No).

Upon establishing this distinction, coders then focused solely on the landscape photos, examining them for the presence of specific stylistic properties. These properties were assessed through two key aspects: visual angle and vertical position.

The visual angle of each landscape photo was evaluated based on the feelings it evokes in the viewer, specifically whether it conveys a sense of looking upwards, at eye level, or downwards (Peracchio & Meyers-Levy, 1992; Roose et al., 2019). This assessment aimed to capture the viewer's perceptual experience of the scene depicted in the photograph. Coders rated (2) Does this photo give you the feeling of looking (Upward/Eyelevel/Downward).

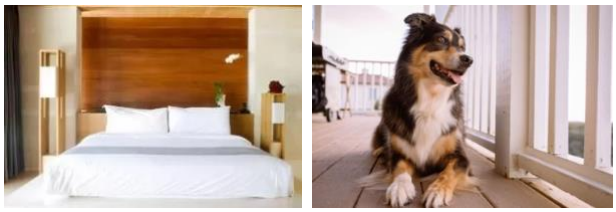
Simultaneously, the vertical position within each landscape photo was scrutinised to determine whether it imparts a sense of being situated below the surface of the ground, close to or at the surface of the ground, or elevated from the surface of the ground (Jami, 2019; Slepian et al., 2015). The vertical position is coded on (3) Does this photo give you the feeling of being (below the surface of the ground/close to or at the surface of ground/elevated from the surface of the ground).

As for the verticality, landscape photos exhibiting an upward visual angle coupled with a depiction of being below the surface or close to/at the surface of the ground were classified as representing low verticality. Conversely, landscape photos displaying a downward visual angle alongside an elevated view point were categorised as embodying high verticality (Slepian et al., 2015).

For each coding question, a binary response system was employed, with a value of 1 assigned to the affirmative answer and a value of 0 assigned to the negative

response. These values were recorded and subsequently entered into a spreadsheet for data analysis.

Table 8: Examples of photos and corresponding codes

<table>
<tr><th colspan="3">Types of photos</th></tr>
<tr><th colspan="2">Landscape photos</th><th>Non-landscape photos</th></tr>
<tr><td colspan="2">  </td><td>  </td></tr>
<tr><th colspan="3">Stylistic properties of landscape photos and their corresponding codes</th></tr>
<tr><th></th><th>Low vertical position</th><th>High vertical position</th></tr>
<tr><td>Upward visual angle</td><td>Low verticality
  </td><td>  </td></tr>
<tr><td>No visual angle (eyelevel)</td><td>  </td><td>  </td></tr>
<tr><td>Downward visual angle</td><td>  </td><td>High verticality
  </td></tr>
</table>

5.4.1.3 Reliability checks

To ensure consistency and accuracy in coding process, the Krippendorff's alpha (α) test was performed to estimate interrater reliability, and α value above 0.7 is

considered reliable (Hayes & Krippendorff, 2007). The reliability checks showed that both coders categorised photos extracted into landscape photos and non-landscape photos without disagreement (α = 1). Of all the landscape photos, high interrater reliability was observed in coding upward visual angle (α = 0.929), eye-level visual angle (α = 0.953), downward visual angle (α = 0.976), below the surface of the ground (α = 0.702), close or on the surface of the ground (α = 0.985), and elevated from the surface of the ground (α = 1). Any disagreements were then identified and resolved through subsequent discussion between the coders.

5.4.2 Coding of construal-representing factors accompanying landscape photos

5.4.2.1 Codebook

Textual content accompanying the landscape photos are coded in terms of the presence of construal-representing cues. Despite the multiple construal-representing factors identified in empirical studies (Table 2), it is acknowledged that these factors align with CLT and can also be represented by the conventional categories of construal-representing factors proposed by Trope et al. (2007) and Trope and Liberman (2010). Thus, the codes include well-established psychological distance cues and construal-representing cues associated with product attributes and features.

Based on the CLT proposed by Trope et al. (2007) and Trope and Liberman (2010) and empirical studies in marketing and advertising, cues that embed four dimensions of psychological distance: temporal distance, social distance, spatial distance, and hypothetical distance, are represented at high vs. low level of construals. Therefore, codes include:

- Social distance cues reflect interpersonal social distance, such as interpersonal similarities and power distance (Liviatan et al., 2008) or

distant vs. close others' recommendations (distant vs. close social distance) (Zhao & Xie, 2011).

- Temporal distance cues reflect the time when an event would occur in the near or distant future. Hence, temporal distance cues appear in messages that are framed with near vs. distal future information (e.g., "we can make a difference in just one month vs. five years") (Hernandez et al., 2015; Spassova & Lee, 2013; Tangari et al., 2010; Tangari & Smith, 2012).
- Spatial distance cues reflect where the event would happen in a close location (e.g., 10 miles away) or a distant location (e.g., 3000 miles away) (Fujita et al., 2006). Hence, spatial distance cues appear in advertisements when consumers are aware of the spatial distance to the product (e.g., a resort/attraction located at a nearby vs. distant location) (Jia et al., 2021; Wang & Lehto, 2019).
- Hypothetical distance cues reflect the probability of an event to take place, the smaller the probability, the more distant hypothetical distance. Hypothetical distance cues appear in messages that inform the probability of an event, such as "95% chance of rain" vs "95% chance of sunny skies" (Wakslak et al., 2006).

In addition to the cues associated with psychological distance dimensions, following suggestions of Trope et al. (2007) and Trope and Liberman (2010), several aspects of the product attributes and features can also be represented at high vs. low level of construals. Typical codes include:

- Primary/central/core vs. secondary/peripheral/non-core features of the product are represented at high vs. low level of construal. The distinction between primary and secondary product attributes is well recognised (e.g., Kotler and Armstrong (2004); Levitt (1980)). Primary product attributes are essential in providing a solution to a specific problem the customer

seeks to resolve and does often identify an object or an event as a specific product or service. All attributes that are not essential to solving the customer's problem are secondary product attributes. And the central/primary feature of the product (e.g., the sound quality of a radio) is high-level. In contrast, the peripheral/secondary feature of the product (e.g., the clock of a radio) is low-level (Trope & Liberman, 2001).

- Desirability vs. feasibility aspect is associated with high vs. low level of construal. Desirability considerations involve the value of an action's end-state ("why" aspect of the action). In contrast, feasibility considerations involve the means used to reach the end state ("how" aspect of the activity). For instance, "software with great feature despite difficulty of use" is high in desirability consideration, while "easy-to-use software with only basic features" is high in feasibility consideration (Fujita et al., 2008; Liberman & Trope, 1998; Zhao et al., 2007). Similarly, a trip that can "fulfil your dream" is high in desirability, while a trip to "explore a new world" is high in feasibility (Aggarwal & Zhao, 2015). Also, tangible attributes of a product such as colour, size, weight; or attributes of an activity such as reading, consuming, or driving is low-level. In contrast, the beneficial aspects of products or activities are high-level as they are valued states that contribute to value satisfaction, such as happiness (Hernandez et al., 2015). In a similar vein, hedonism vs. utilitarian also fit into the desirability vs. feasibility category (Fujita et al., 2008).

Table 9 shows a list of photo examples of codes that align with the definition of each code.

5.4.2.2 Coding processes

Following the codebook, the two coders were instructed to familiarise themselves with the codes and examples as shown in Table 9; and then they were instructed to

code the textual content on whether each textual content contains psychological distance cues, including spatial distance cues on (Yes/No), social distance cues on (Yes/No), temporal distance cues on (Yes/No), and hypothetical distance cues on (Yes/No). The coders also coded whether the textual content contained construal-representing cues associated with product attributes and features, including primary/central (Yes/No) vs. secondary/peripheral cues (Yes/No), and desirability/hedonism/benefits (Yes/No) vs. feasibility/utilitarian/attributes cues (Yes/No).

The coders did not code the textual content when it has no construal-representing cues mentioned above. Similarly to coding visual content, for each coding question, a binary response system was employed, with a value of 1 assigned to the affirmative answer and a value of 0 assigned to the negative response. These values were recorded and subsequently entered into a spreadsheet for data analysis.

5.4.2.3 Reliability checks

The Krippendorff's alpha (α) test was used to estimate the interrater reliability (Hayes & Krippendorff, 2007). Of textual content accompanying landscape photos, relatively high interrater reliability was also observed in spatial distance (α = 1), social distance (α =1), temporal distance (α =1), hypothetical distance (α =1), primary (α = 0.771), secondary (α = 0.881), desirability (α = 0.890), and feasibility (α = 0.944). Any disagreements were then identified and resolved by subsequent discussion between the coders.

Table 9: Examples of textual content and corresponding construal level codes

Textual content and the advertised products/services	Spatial distance	Social distance	Primary	Secondary	desirability	Feasibility
London (Destination)	✓					
Bangkok (Destination)	✓					
Friendly atmosphere with **personal** touch (Hotel)		✓				
The **water was the bluest** I've ever seen and the **sand was powdery white**. (Beach)			✓			
The **perfect vacation**. The best part was simply **chilling on our veranda, looking out at the ocean, watching parrots fly past.** (Resort)			✓	✓		✓
A **beautiful remote beach** that can only be **reached by descending ladders** and stone steps. The **majestic bluffs** will take your breath away. (Beach)			✓			✓
Breathless **Cancun Soul Resort & Spa By AMR™ Collection.** (Hotel)	✓		✓			
The **sunsets** are amazing, spacious grassed **picnic areas**, iconic **camel rides** and beach side **restaurants.** (Beach)				✓		
Find flights that will **take** you to **the most loved places.** (Flights)					✓	✓
A cosy little **heaven** for kids and parents. (Beach)					✓	
The **Dominican Republic** delights visitors with its mix of **white-sand beaches** and "gingerbread" **Victorian architecture**. Nine hundred miles of **Caribbean coastline** make the Hispaniola Island country **a beach-lover's paradise**. **Day-trip to Puerto Plata** and **ride the cable car** up Mount Isabel de Torres, or **groove** to the steel drum beats of **Cabarete nightlife**. **The breezy palms and sparkling waters** of Punta Cana make it a **true tropical paradise.** (Destination)	✓		✓	✓	✓	✓

5.5 Results

5.5.1 Results of the visual content analysis

The visual content analysis provides evidence that vertical position is the most prevalent stylistic property that appears in landscape photos, compared with visual angle and verticality. Firstly, Table 10 shows that of the total of 870 photos, 688 (79%) photos featured a landscape scenery, which is more than the photos that did not feature a landscape scenery (n = 182, 21%). Of 688 landscape photos, they exhibit distinct and varied frequencies of stylistic properties, including vertical position, visual angle, and verticality.

Table 10: Examples of photos, corresponding codes, and frequencies

<table>
<tr><td colspan="3">Types of photos
(n = 870)</td></tr>
<tr><td>Landscape photos
(n = 688, 79%)</td><td colspan="2">Non-landscape photos
(n = 182, 21%)</td></tr>
<tr><td>  </td><td colspan="2">  </td></tr>
<tr><td colspan="3">Stylistic properties of landscape photos, corresponding codes, and frequencies
(n = 688)</td></tr>
<tr><td></td><td>Low vertical position</td><td>High vertical position</td></tr>
<tr><td>Upward visual angle</td><td>Low verticality (n = 64, 6.1%)
  </td><td>(n = 2, 0.2%)
  </td></tr>
</table>

No visual angle (eyelevel)	(n = 228, 20.6%) 	(n = 87, 10.8%) 
Downward visual angle	(n = 16, 1.2%) 	**High verticality** (n = 291, 27.6%) 

Table 11 summarises the frequencies of stylistic properties of the 688 landscape photos. It shows that all the 688 (100.0%) photos depict changes in vertical positions, including 308 (44.8%) that have a relatively low vertical position and 380 (55.2%) that have a relatively high vertical position. It is noteworthy that no landscape photos are identified as "below the surface of the ground," which is consistent with the argument regarding the metaphorical associations that there is no "down below" scenario to enable the effect of metaphorical associations (Figure 12).

Of 688 landscape photos, 373 (54.2%) photos depict dichotomous visual angle, with 66 (9.6%) photos featuring an upward visual angle and 307 (44.6%) photos featuring a downward visual angle. Additionally, of the 688 landscape photos, 348 (50.6%) photos use verticality, with only 57 (8.3%) photos depicting low verticality, and 291 (42.3%) photos depicting high verticality.

Table 11: Frequency of occurrence of stylistic properties and their visual components in landscape photos (n = 688)

Stylistic property	Total frequency	Total percentage	Visual components	Frequency	Percentage
Vertical position	688	100.0%	low vertical position	308	44.8%
			high vertical position	380	55.2%
Visual angle	373	54.2%	upward visual angle	66	9.6%
			downward visual angle	307	44.6%
Verticality	348	50.6%	low verticality	57	8.3%
			high verticality	291	42.3%

This visual content analysis of photos demonstrates that the vertical position proposed in this thesis (high vs. low vertical position) is indeed the most prevalent stylistic property that appears in landscape photos (100%). This prevalence is higher when compared with the presence of dichotomous visual angle (54.2%) and dichotomous verticality (50.6%). The results suggests that vertical position plays a significant role in landscape photos and should be considered when examining the impact of stylistic properties on viewer perceptions and evaluations of advertisements.

5.5.2 Results of the textual content analysis

The results of textual content analysis revealed that spatial distance cues are the most prevalent construal-representing factors accompanying landscape photos in the sample of tourism advertisements. As shown in Table 7, all the photos are accompanied with textual content, indicating there are 688 textual contents accompanying the 688 landscape photos. As shown in Figure 17, among 688 textual content, 655 (95.2%) convey spatial distance cues, while only 1 (0.2%) conveys social distance cues. However, there were no cues showing temporal distance or hypothetical distance in the textual content, hence, these two cues were not reported in Figure 17.

In terms of the construal-representing cues associated with product attributes and features (hereafter: product attribute cues), as shown in Figure 17, of 688 textual content, 79 (11.5%) textual content pieces highlight the primary aspect of the advertised products or services, representing high-level construals, and 38 (5.5%) focus on secondary aspects of the advertised product or services, representing low-

level construals. Regarding the desirability/feasibility category, 22 (3.2%) textual content pieces emphasise high-level construals via high desirability considerations, and 49 (7.1%) textual content pieces highlight low-level construals via high feasibility considerations.

The textual content analysis further shows that spatial distance cues appear to be the most prevalent construal-representing factors accompanying landscape photos in the sample of tourism advertisement, emphasising the importance of considering spatial distance cues when analysing tourism advertisements and their impact on consumer perceptions and decision-making.

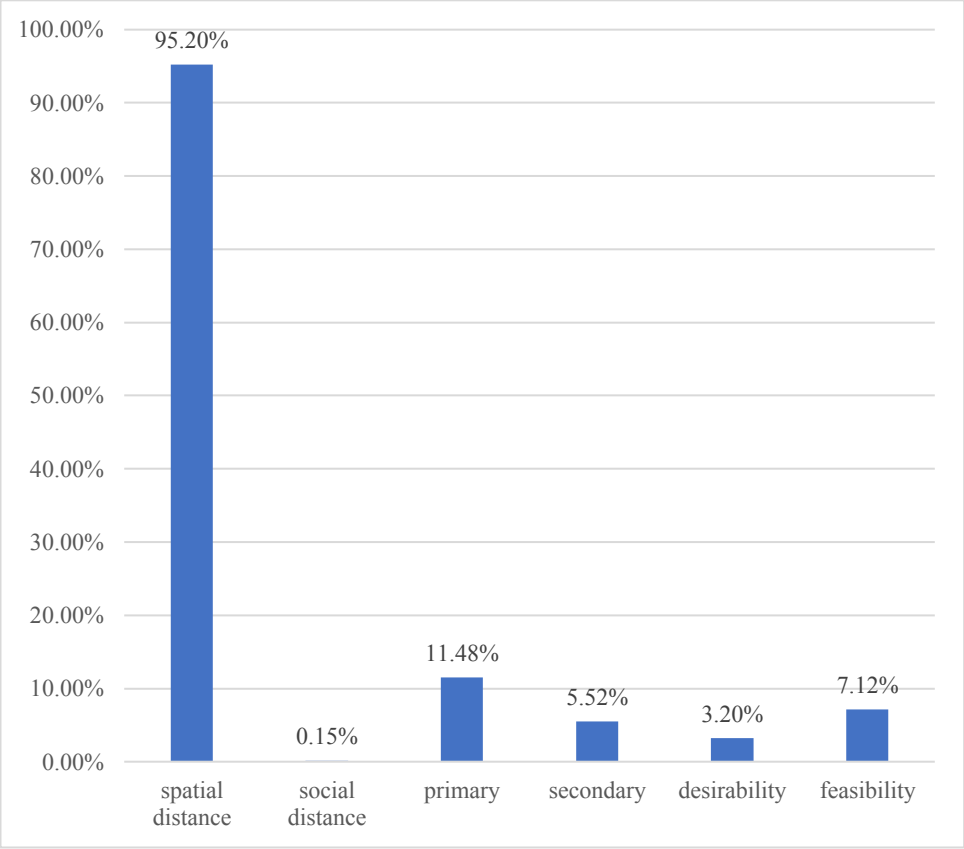


Figure 17: Percentage of the presence of construal-representing cues

5.6 Discussion

The visual content analysis revealed that vertical position conceptualised in this thesis exist independently from visual angle and verticality. And most importantly, its

visual representations can also be distinguished from visual representations of visual angle and verticality (Table 10). The findings contribute to the literature in stylistic properties by introducing a new conceptualisation/typology of vertical position that is independent from previous conceptualisation of vertical position based on verticality (Table 1). Regarding the prevalence of vertical position in advertising reality, it is the most prevalent stylistic property used in advertisements, compared with visual angle and verticality, which further answers RQ1 (Table 10 and Table 11).

The prevalence of vertical position indicates that the investigation of the effect of vertical position on advertising effectiveness is valuable. From the methodological perspective of the quantitative content analysis, the prevalence of vertical position (100%) in landscape photos indicate that vertical position is more primary and impactful than visual angle (54.2%) and verticality (50.6%) (Coe & Scacco, 2017; Riff et al., 2014).

The textual content analysis firstly supports the appropriateness of adopting the framework of congruence in construal level to explain advertising effectiveness, as proposed by Peracchio and Meyers-Levy (2005). This is evidenced by the fact that advertisements typically contain multiple elements, such as photos accompanied by textual content. This analysis showed 95.2% of landscape photos are accompanied by spatial distance cues —— a construal-representing factor —— which further support the adoption of the framework of congruence in construal level in explaining advertising effectiveness, addressing RQ4.

5.7 Chapter conclusion

In conclusion, this chapter provided a quantitative content analysis, encompassing both quantitative visual content analysis and quantitative textual content analysis. The detailed methods, design, unitising, content sampling, codes, and coding procedures were presented, leading to valuable findings.

The quantitative visual content analysis firstly validated the research construct — perceived vertical position. Results revealed that the perceived vertical position is the most prevalent and impactful stylistic property of landscape photos, compared with visual angle and verticality. Additionally, the analysis showed that vertical position, visual angle, and verticality feature varied visual representations. The findings of the visual content analysis answered RQ1.

The quantitative textual content analysis revealed that spatial distance cues are the most prevalent construal-representing factors in combination with landscape photos in advertisements, answering RQ4. These results also validated the adoption of congruence effect framework and guide the development of further studies investigating the combined influence of vertical position in landscape photos and spatial distance on advertising effectiveness.

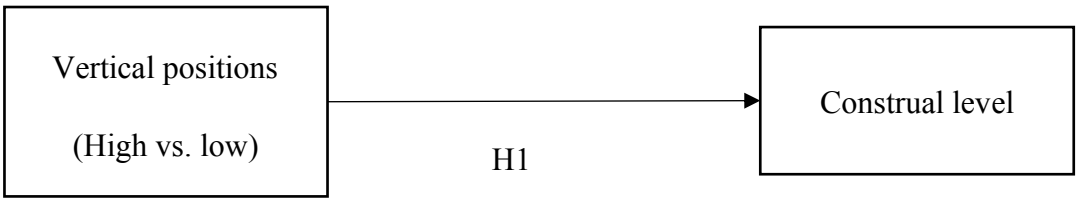
Building on the findings from the quantitative content analysis, this thesis moves forward to investigate the impact of vertical position on advertising effectiveness by addressing the effect of vertical position on construal level (Study 2 and Study 3) and the congruence in construal levels between vertical position and spatial distance on advertising effectiveness (Study 4(a) and Study 4(b)).

Chapter 6: Study 2 – Perceived Vertical Position Influences Construal Level

Chapter Content

6.1 Chapter introduction

This chapter investigates the effect of perceived vertical position on construal level. This chapter presents the design and findings of Study 2. In this chapter, the detailed design of a between-subject experiment will be presented and followed by the findings of the experiment. This study aims at answering RQ2: Does vertical position conceptualised in this thesis have an effect on construal level? by testing Hypothesis 1: Perceived vertical position is positively related to consumers' construal level.



This chapter begins with the experimental design of Study 2. Section 6.3 presents justifications for variables, instrumentations, and materials. It is noteworthy that Section 6.3 includes a comprehensive **Pretest** to establish the experimental stimuli to manipulate the independent variable: perceived vertical position. This pretest manages to control visual confounds such as perceived visual distance, perceived visual angle, and perceived verticality. Section 6.4 then informs detailed study design, including experiment design, participants, experiment procedures, data collection and data analysis.

Next, Section 6.5 presents the result of Study 2, including participants demographic breakdown, measurement scales, descriptive statistics; and most importantly, ANOVA examines the effect of perceived vertical position on construal level, supporting H1.

Section 6.6 draws inferences from the results and presents the discussion regarding the effect of vertical position on construal level.

Finally, Section 6.7 presents the chapter conclusion.

6.2 Purpose

Study 2 examines the independent effect of perceived vertical position on construal level. This study aims to answer RQ2: Does vertical position conceptualised in this thesis have an effect on construal level (abstractedness/concreteness processing style)? by testing Hypothesis 1: Perceived vertical position is positively related to consumers' construal level.

6.3 Variables, instrumentation, and materials

6.3.1 Independent variable

Perceived vertical position

The independent variable (IV) in this study is the perceived vertical position. Similar to the previous studies, vertical position has two relative levels: high vertical position and low vertical position (e.g., Aggarwal and Zhao (2015); Jami (2019); Slepian et al. (2015)). In experimental design, levels of IV will be manipulated (Creswell, 2003; Saunders et al., 2016). The following sections explain the manipulation of IV (i.e. high vertical position and low vertical position) and the manipulation checks.

- ***Manipulation of vertical position***

The manipulation of vertical positions requires manipulating high and low vertical positions while controlling visual angle (and verticality associated with visual angle) and other visual confounds such as visual distance. Previous studies on vertical position manipulation have shown that moving the vertical position of a camera up and down should evoke changes in perceived vertical positions (e.g., Aggarwal and Zhao (2015); Slepian et al. (2015); Jami (2019)). Among previous studies, only Aggarwal and Zhao (2015) indicate that the manipulation of high perceived vertical

position involves seating participants on high stools with a height of 29 1/8 inches, while the manipulation of low perceived vertical position involves seating participants on low stools with a height of 9 3/4 inches. In the case of landscape photos, no studies have revealed the exact heights of the camera that should be used to manipulate high and low perceived vertical positions. As a result, the method for manipulating vertical position in landscape photos remains unknown.

Furthermore, existing manipulations of vertical position have not managed to control visual angle (e.g., Aggarwal and Zhao (2015) (Study 3 & 4) and Slepian et al. (2015)) and visual distance (e.g., Jami (2019)). In visual communication literature, visual angle is considered dichotomous and seemingly symmetric, either upward or downward (Aggarwal and Zhao (2015); Slepian et al. (2015); Jami (2019); Roose et al. (2019)). Hence, this thesis will manage to control visual angle by retaining only downward angles for realistic reasons, as no landscape photos appear to be "below the surface" (e.g., Jami (2019)). In this way, verticality will also diminish without the presence of dichotomous visual angles. A new vertical position manipulation that controls visual distance and visual angle will be developed. And a manipulation technique shown in Figure 18 is proposed.

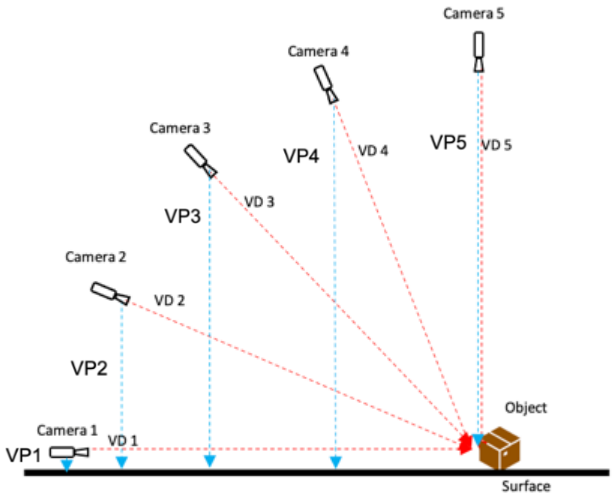


Figure 18: Proposed manipulation technique of vertical positions

This thesis proposes that the manipulation technique will take photos moving from Cameras 1 to 5, which adheres to the notion of increasing the vertical position (VP) of the camera, potentially manipulating ascending perceived vertical positions from VP1 to VP5. Meanwhile, the actual visual distance can be controlled by keeping the identical visual distance (VD) from the centre of the scene. Moreover, to enhance the internal validity of the experimental study, a supplementary self-reported measurement of perceived visual distance will facilitate to statistically control the visual distance. The manipulation technique (Figure 18) also controls visual angles by eliminating upward visual angles. Realistically, as shown in Figure 10, it is unlikely that landscape photos can be taken with upward angles when vertical position is salient (Jami, 2019).

It is noteworthy that increasing the vertical positions of the camera while focusing on the same object will inevitably alter the magnitude of the degrees of the downward angles (while all the visual angles remain downward). Meanwhile, the visual angle effect is considered present only when comparing upward vs. downward visual angles (Aggarwal and Zhao (2015); Slepian et al. (2015); Jami (2019); Roose et al. (2019)). However, this thesis takes extra caution to enhance the internal validity of the experimental study. It considers the possible impact of the magnitude of the visual angles by using self-reported measurements of visual angles to statistically control for potential effects. Since the proposed manipulation technique has not been seen in previous studies, the following sections further explain how the stimuli are produced and tested.

- ***Stimuli production***

A set of landscape photos of a scene (i.e. a beach) were taken by following the manipulation technique shown in Figure 18. Photos of the same beach were taken from VP1 = 50m (Camera 1), VP2 = 125m (Camera 2), VP3 = 250m (Camera 3), VP4 = 375m (Camera 4), and VP5 = 500m (Camera 5) above sea level (Figure 19 (a) to (e)). The actual visual distances (VD1, VD2, VD3, VD4, and VD5) from the centre of

the scene are 500m, and visual angles remain downward. The decisions on the type of scene, vertical position, and visual distance are made because of the following reasons.

Choice of the landscape scenery

A beach was chosen to test the manipulation technique due to its relevance to the context of tourism advertisements, also the type of scene does not seem to influence the theorisation of the effect of vertical position on construal level. Firstly, ads often use landscape photos of beaches (e.g., Apple, WHO, Booking.com, Disney, and FIJI Water). Secondly, stylistic properties such as visual distance, visual angle, and vertical position are generic factors that should influence consumers independent of varied visual content (e.g., scene or product) (Jami, 2019; Kim et al., 2019; Peracchio & Meyers-Levy, 1994; Peracchio & Meyers-Levy, 2005; Roose et al., 2019; Scott, 1994). Therefore, this thesis declares that the types of scenes are contextualised factors that show no evidence in influencing the focal relationship. In addition, previous studies on construal level have repeatedly used beaches in experimental scenarios (e.g., Kim et al. (2016); Smith and Trope (2006); Wakslak et al. (2006)). Thus, a beach was chosen to examine the manipulation technique.

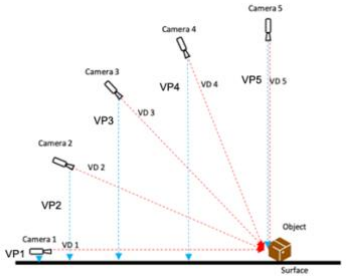
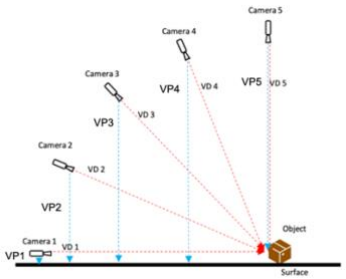
Choice of the visual distance

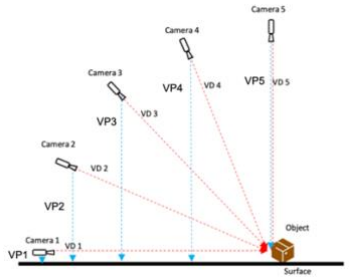
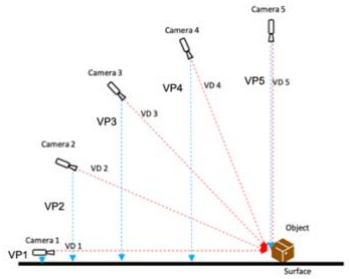
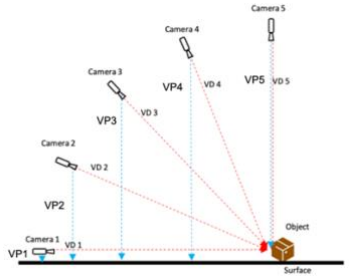
Secondly, as for the choice of the visual distance, none of the previous studies has revealed any information on the exact visual distance that should be used. Nonetheless, visual distance should not have any effect on participants' ability to perceive vertical positions (i.e. ability of visual perceptions) (e.g., Aggarwal and Zhao (2015) (Study 3 & 4), Jami (2019), and Slepian et al. (2015)). Thus, a visual distance of 500m to the scene should not affect the visual perceptions of vertical positions. And 500m is an appropriate distance for taking landscape photos that capture an overview of the beach scenery.

Choice of the vertical position

Thirdly, as for the choice of the vertical position, the maximum actual vertical position depends on the actual visual distance. In other words, when looking straight down from overhead, the actual visual distance equals the actual vertical position. In this case, the vertical position should have a range from 0m to 500m. Aggarwal and Zhao (2015) have shown that sitting on $29_{1/8}$ inches and $9_{3/4}$ inches stools can manipulate a high and a low perceived vertical position, respectively. However, the height provided by Aggarwal and Zhao (2015) is not adaptable in landscape photos. Since previous studies have never provided the exact height of the camera that should be used to manipulate high and low perceived vertical positions, the author then attempts to evenly divide the actual height into four positions: 125m, which is the ¼ of the 500m; 250m, which is the 1/2 of 500m; and 275m, which is the ¾ if the 500m; and 500m, which is the 4/4 of 500m. In addition to these four evenly divided positions, the author also adds a photo taken from a very low vertical position (at 50m) to facilitate holistic presentations of vertical positions in landscape photos. The photos are taken using a drone and photos are further edited to make sure the visual content among landscape photos is consistent.

A Pretest follows to examine whether these design choices can manipulate high and low perceived vertical positions while controlling perceived visual distance and perceived visual angle.

Figure 19: Stimuli production and design choices					
Conditions	**Manipulation technique**	**Stimuli production**	**Actual vertical position**	**Actual visual distance**	**Actual visual angle**
VP1	 Camera 1	 Figure 19 (a)	VP1 = 50m	VD1 = 500m	**Downward**
VP2	 Camera 2	 Figure 19 (b)	VP2 = 125m	VD2 = 500m	**Downward**

VP3	 Camera 3	 Figure 19 (c)	VP3 = 250m	VD3 = 500m	**Downward**
VP4	 Camera 4	 Figure 19 (d)	VP4 = 375m	VD4 = 500m	**Downward**
VP5	 Camera 5	 Figure 19 (e)	VP5 = 500m	VD5 = 500m	**Downward**

- ***Pretest***

The Pretest aims at confirming the visual stimuli that manipulate high and low vertical positions while controlling visual distance and visual angle.

Participants and procedures

Ninety (90) participants were recruited from Prolific in this Pretest. A set of photos echo five conditions featuring ascending vertical positions: VP1, VP2, VP3, VP4, VP5 conditions (Figure 19). Participants were randomly assigned to either one of the five conditions:

Participants (N=18) in the VP1 condition are exposed to Figure 19 (a);

Participants (N=20) in the VP2 condition are exposed to Figure 19 (b);

Participants (N=17) in the VP3 condition are exposed to Figure 19 (c);

Participants (N=18) in the VP4 condition are exposed to Figure 19 (d);

Participants (N=17) in the VP5 condition are exposed to Figure 19 (e).

All the participants were directly instructed to view the landscape photo. After viewing the assigned photo, participants reported perceived vertical position by answering "When watching this photo, how high does this photo of the beach make you feel?" on a 10-point Likert-type scale (1= very low, 10= very high) (Aggarwal & Zhao, 2015). As the Pretest also seeks to test which stimuli can control visual distance and visual angle, participants were also asked to report the perceived visual distance from the scene by answering "When watching this photo, how far away do you feel this beach is from you?" on a 10-point Likert-type scale (1= very near, 10= very far) (Aggarwal & Zhao, 2015). And a self-reported measurement of visual angle was obtained by rating "To what extent do you imagine looking down versus looking up" on a seven-point bipolar scale (1: looking down to 7: looking up) (Roose et al., 2019).

- ***Results of Pretest***

As presented in Table 12, ANOVA showed significant differences in perceived vertical positions (M_{VP1} = 0.06, SD_{VP1} = 2.07; M_{VP2} = 7.35, SD_{VP2} = 1.27; M_{VP3} = 8.29, SD_{VP3} = 1.05; M_{VP4} = 8.72, SD_{VP4} = 1.13; M_{VP5} = 9.29, SD_{VP5} = 0.85; F(4, 85) = 15.869, $p < 0.001$). Descriptive statistics show that the increase in the actual vertical position can increase the perceived vertical position.

ANOVA also showed an insignificant difference in visual distances (M_{VP1} = 7.17, SD_{VP1} = 2.01; M_{VP2} = 7.05, SD_{VP2} = 1.76; M_{VP3} = 7.24, SD_{VP3} = 1.15; M_{VP4} = 7.67, SD_{VP4} = 1.61; M_{VP5} = 8.47, SD_{VP5} = 1.42; F(4, 85) = 2.246, $p = 0.071$). In line with the prediction, keeping the actual visual distance can control the perceived visual distance.

Descriptive statistics show that participants in all conditions perceive looking down because all the means are below the midpoint (3.5) ((M_{VP1} = 3.44, SD_{VP1} = 2.01; M_{VP2} = 1.50, SD_{VP2} = 0.61; M_{VP3} = 1.71, SD_{VP3} = 1.05; M_{VP4} = 1.28, SD_{VP4} = 0.58; M_{VP5} = 1.47, SD_{VP5} = 0.72). However, ANOVA reveals significant differences in perceived visual angle (F(4, 85) = 11.306, $p < 0.001$). Thus, further analyses were conducted to decide the experimental stimuli.

Table 12: Stimuli and results

Conditions	Actual vertical position	Perceived vertical position	Actual visual distance	Perceived visual distance	Actual visual angle	Perceived visual angle
VP1	VP1 = 50m	6.06	VD1 = 500m	7.17	Downward	3.44
VP2	VP2 = 125m	7.35	VD2 = 500m	7.05	Downward	1.50
VP3	VP3 = 250m	8.29	VD3 = 500m	7.24	Downward	1.71
VP4	VP4 = 375m	8.72	VD4 = 500m	7.67	Downward	1.28
VP5	VP5 = 500m	9.29	VD5 = 500m	8.47	Downward	1.47
ANOVA		$p < 0.001$		$p = 0.071$		$p < 0.001$

- ***Choice of experimental stimuli for the main study***

Study 1 aims to test the independent variable (i.e. vertical position) with two levels (i.e. high versus low vertical position) while controlling visual distance and visual angle. Thus, repetitive independent-samples t-tests between two VP conditions were performed. Table 13, Table 14, and Table 15 present the significant levels of independent-samples t-tests of paired conditions: VP1 vs. VP2, VP1 vs. VP3, VP1 vs. VP4, VP1 vs. VP5, VP2 vs. VP3, VP2 vs. VP4, VP2 vs. VP5, VP3 vs. VP4, VP3 vs. VP5, and VP4 vs. VP5. Results are grouped by perceived vertical position (Table 13), perceived visual distance (Table 14), and perceived visual angle (Table 15).

Table 13: Significance level (*p*) of between-group comparisons on perceived vertical position

	VP1	**VP2**	**VP3**	**VP4**
VP2	**0.024**			
VP3	**<0.001**	**0.020**		
VP4	**<0.001**	**0.001**	0.253	
VP5	**<0.001**	**<0.001**	**0.004**	0.101

Table 14: Significance level (*p*) of between-group comparisons on perceived visual distance

	VP1	**VP2**	**VP3**	**VP4**
VP2	0.850			
VP3	0.903	0.713		
VP4	0.415	0.269	0.370	
VP5	**0.034**	**0.011**	**0.009**	0.127

Table 15: Significance level (*p*) of between-group comparisons on perceived visual angle

	VP1	**VP2**	**VP3**	**VP4**
VP2	**<0.001**			
VP3	**0.003**	0.461		
VP4	**<0.001**	0.255	0.140	
VP5	**<0.001**	0.895	0.450	0.385

Table 13 shows between-group comparisons on perceived vertical positions. Ideally, all the p-values should be lower than 0.05 (significant). However, differences

in the perceived vertical positions in VP3 (250m) versus VP4 (375m) and VP4 (375m) versus VP5 (500m) are insignificant. Thus, two pairs of stimuli in VP3 vs. VP4 and VP4 vs. VP5 will be dropped.

Table 14 shows between-group comparisons on perceived visual distance. Ideally, all the p-values should be larger than 0.05 (insignificant). However, the stimulus in VP5 condition showed an unexpected increase in the perceived visual distance, compared with other groups, even though the actual visual distance was controlled. Thus, the stimulus in VP5 (Figure 19 (e)) will be dropped.

Table 15 shows between-group comparisons on perceived visual angle. Ideally, all the p-values should be greater than 0.05 (insignificant). However, the stimulus in VP1 condition showed a significant difference in perceived visual angle, compared with other groups. Thus, the stimulus in VP1 (Figure 19 (a)) will also be dropped.

In summary, stimuli in VP2 (Figure 19 (b)) will be used to manipulate low vertical position and stimuli in VP4 (Figure 19 (d)) will be used to manipulate high vertical position. Although, two pairs of stimuli in VP2 vs. VP3 and stimuli in VP2 vs. VP4 are both eligible to manipulate high and low vertical positions while controlling visual distance and visual angle, stimuli in VP2 vs. VP4 incurred the most significant difference in perceived vertical position ($p = 0.001$).

- ***Measurement***

After the manipulation of vertical positions, a straightforward single-item scale captures perceived vertical position. The use of single-item scale has been demonstrated as a reliable and consistent measurement of perceived vertical position in previous studies (e.g., Aggarwal and Zhao (2015); Slepian et al. (2015); Jami (2019)). Aggarwal and Zhao (2015) asked participants to indicate how high (elevated) the pictures made them feel on a scale of 1 (very low) to 10 (very high). Slepian et al. (2015) asked participants to indicate "How high/low does this picture make you feel?" from 1 (extremely low) to 7 (extremely high). And Jami (2019) asked participants to indicate, on a seven-point scale, whether they felt as if they were at a high altitude

when they were viewing the landscape photos. Therefore, in line with the previous studies, this thesis measures perceived vertical position by asking participants to indicate:

"When watching this photo, how high does this picture make you feel?"

from 1 (very low) to 10 (very high).

6.3.2 Dependent variable

Construal level

Construal level is the sole dependent variable (DV) in Study 1. Construal level is a continuous variable, which will be measured in the main study, following the established approach in the literature (Trope & Liberman, 2010; Trope & Liberman, 2012; Trope et al., 2007).

- ***Measurement***

The measurement instruments of construal level reflect measurements of mental representations. CLT describes the extent to which individuals perceive, comprehend, and interpret objects, actions, events, etc. using **abstract, superordinate, and decontextualized representations (high-level construal)** or using **concrete, subordinate, and contextualized representations (low-level construal)** (Trope & Liberman, 2012; Trope et al., 2007). Thus, measuring mental representations should capture one's construal level.

Category Inclusiveness Task is a typical measurement of mental representations that captures construal level (Appendix B) (Isen & Daubman, 1984; Wakslak et al., 2006). According to Rosch (1975) and Isen and Daubman (1984), the Category Inclusiveness Task measures construal level by indicating how well an example represents a certain semantic category. Based on the study by Rosch (1975), people can generate several representations/examples (e.g., robin, parrot, and penguin) for a

semantic category (e.g., bird). Meanwhile, each category normally has multiple examples that vary in representativeness of or belongingness to that category. For instance, Rosch (1975) noted that overall, in people's minds, "robin", compared with "parrot", is a better example of "bird", while "parrot" is a better example than "penguin". Thus, in the Category Inclusiveness Task, "robin" is called a strong exemplar, "parrot" is called a moderate exemplar, and "penguin" is called a weak exemplar (Isen & Daubman, 1984). As such, using the Category Inclusiveness Task, asking participants to rate how much the strong, moderate, and weak exemplars belong to a category from **1 (definitely does not belong) to 10 (definitely does belong)** reflects how abstract their processing style is. A more inclusive categorisation signifies a more abstract processing style (i.e. high-level construal), and the higher the score, the higher the construal level (Isen & Daubman, 1984; Rosch, 1975). In empirical studies, the format of measurement varies.

The formats of the Category Inclusiveness Task are versatile. Slepian et al. (2015) used two categories: furniture and vehicle, and adopted the complete scale from 1 to 10. Roose et al. (2019) used two categories: furniture and vehicle, and calculated score in a binominal fashion — taking the score above five as inclusion and score below five as exclusion. And Jami (2019) used four categories: clothing, furniture, vegetable, and vehicle to measure construal level and took the complete scale from 1 to 10. Meanwhile, multiple studies on visual prime of construal level have adopted the Category Inclusiveness Task to measure construal level, and findings have proved its reliability (e.g., Jami (2019); Roose et al. (2019); Slepian et al. (2015)).

To conclude, this thesis includes **four categories** (e.g., furniture, weapon, toy, and vehicle) from ten categories developed by Rosch (1975). And this thesis will use the **original scale from 1 (definitely does not belong) to 10 (definitely does belong)** in order to minimise the bias toward a certain category. A partial example of the measurement instrument is as follows (Please see Appendix B for a complete instrument used in this thesis).

Please indicate the extent to which the following three objects can represent FURNITURE? From 1 (definitely does not belong) to 10 (definitely does belong) (Rosch, 1975).

	1	2	3	4	5	6	7	8	9	10
Chair										
Lamp										
Telephone										

- ***Other measurement instruments***

Behavioural identification form (BIF)

Originated from the action identification theory, BIF concerns how people optimally conceptualise their actions (Vallacher & Wegner, 1985). CLT adopts the BIF developed by Vallacher and Wegner (1989), a measure of how abstractly or concretely individuals represent actions, as the measurement of construal level (e.g., Agrawal (2005); Fujita et al. (2006); Fujita et al. (2006); Liberman & Trope (1998); Slepian et al. (2015)). BIF has 25 items, and each question requires participants to choose the best-fit description for an action (e.g., "Toothbrushing"). And descriptions include a low-level concrete description (e.g., "Moving a brush around in one's mouth") and a high-level abstract description (e.g., "Preventing tooth decay"). Choosing the high-level (vs. low-level) description means a high-level (vs. low-level) construal (Liberman & Trope, 1998). Although BIF was originally used to measure chronic/trait construal level, later studies have evidenced that after manipulating one's construal level, individuals change their patterns to construe actions at high and low levels of construal (e.g., Agrawal (2005); Aggarwal and Zhao (2015); Förster et al. (2004); Slepian et al. (2015)).

However, BIF will not be used in this thesis for several reasons. First, the original BIF has 25 items (Liberman & Trope, 1998) while varied item numbers are evident in some studies, such as 21 items (e.g., Aggarwal and Zhao (2015)), 13 items (e.g., Fujita et al. (2006)) and 10 items (e.g., Slepian et al. (2015)) out of 25 items. However, the shortened versions of BIF across studies show no consistency, thus,

potential biases towards a certain action are unknown. Second, BIF concerns construal of actions while Category Inclusiveness Task manifests construal of objects (e.g., visual materials or advertisement), indicating that Category Inclusiveness Tasks has better fit with the research context of this thesis.

Four dimensions of psychological distance

Other measurement instruments are mostly single-item scales echoing four dimensions of psychological distance. According to CLT, measuring psychological distance should manifest construal level (Trope & Liberman, 2010; Trope & Liberman, 2012; Trope et al., 2007). As for the **temporal distance**, construal level can be measured by asking participants to estimate in how much time from now they would do a certain activity. The more time they anticipate, the higher the construal level (Liberman et al., 2007). As for the **spatial distance**, construal level can be measured by asking participants to estimate the spatial distance from the target object. The further the spatial distance, the higher the construal level (Trope et al., 2007). As for the **social distance**, interpersonal similarity (Liviatan et al., 2008) are commonly used to measure a near or a distant interpersonal closeness. The more distant the social distance, the higher the construal level. As for the **hypothetical distance**, measuring probability estimation reflects construal level. For instance, participants indicate how likely they would do something. The more likely they would, the lower the construal level (Wakslak & Trope, 2009). Psychological distance dimensions are usually measured on single-item scale, which are often used as the manipulation check when construal level is manipulated (i.e. independent variable) (e.g., Hong and Lee (2010)) because single-item scales have the advantage of minimizing respondent refusal to data collection and processing costs (Bergkvist & Rossiter, 2007).

The selection of the category inclusiveness task is aligned with the purpose of this thesis. Firstly, this thesis aims at establishing the impact of vertical position on construal level, an overall processing styles of consumers which is not limited to any specific context. In other words, this thesis intends to investigate the scenarios when consumers construe a concept, entity (e.g., advertisements), rather than an action (i.e.

behavioural identifications) or how they feel they are away from the entity (i.e. psychological distance). Considering the measurement of mental representation (e.g., Category Inclusiveness Task and BIF) is a more "direct" indicator of construal level than psychological distance (Fujita et al., 2006; Slepian et al., 2015; White et al., 2011), it is more reasonsable to utilise direct measurement of the mental representation. Secondly, based on the principles of construal level theory and congruence in construal level framework, such processing styles are believed to carry on when participants are requested to complete subsequent tasks, such as evaluating an advertising message with the pre-manipulated processing styles (Trope & Liberman 2001, 2010). Hence, the overall processing style is considered to exert a broader impact than context-specific measurements of construal level. Therefore, based on this incremental logic as recommended by Aggarwal and Zhao (2015) and Roose et al. (2019), this thesis aims to evaluate participants' subsequent evaluations of an entity rather than an action/behaviour. Therefore, consistent with the work of Jami (2019), Roose et al. (2019), and Slepian et al. (2015), this thesis adopts the category inclusiveness task to capture participants' overall construal level.

6.3.3 Control variables

Additional procedures will be implemented to exert control into experiments, and this thesis will statistically control the effect of potential covariates on construal level (Creswell, 2003).

6.3.3.1 Visual distance

Visual distance will be controlled as it is a construal-representing factor in the literature of visual antecedents of construal level (e.g., Aggarwal and Zhao (2015); Hansen and Wanke (2010); Kim et al. (2019)). Apart from the actual visual distance, subjective estimation of visual distance also induces construal level (Roose et al., 2019; Van Kerckhove et al., 2015). Thus, actual visual distance and perceived visual distance will be controlled.

Visual distance is measured on a single-item scale. Aggarwal and Zhao (2015) asked participants to indicate, “When watching this photo, how far away do you feel this beach is from you?” on a 10-point Likert-type scale (1= very near, 10= very far). Kim et al. (2019)) asked participants to evaluate perceived visual distance from each product shown in photo on a 7-point bipolar scale (1 = near, 7 = far). Van Kerckhove et al. (2015) asked participants to estimate visual distance from the target using centimetres. The reliability of a single-item scale to measure visual distance has received empirical support. Thus, in line with Aggarwal and Zhao (2015), this thesis measures visual distance by asking participants**: “When watching this photo, how far away do you feel this scene is from you?” on a 10-point Likert-type scale (1= very near, 10= very far).**

6.3.3.2 Visual angle

The effect of visual angle on construal level is caused by subjective estimation of visual distance (Van Kerckhove et al., 2015). Thus, measurement of visual distance should facilitate to statistically control visual angle. In addition, as shown in the Pretest, experimental stimuli control visual angles by taking photos with downward camera angles. Nonetheless, this thesis also adds measurement of perceived visual angle in the main study.

Participants are asked to rate **“To what extent do you imagine looking down versus looking up” on a seven-point bipolar scale (1: looking down to 7: looking up)** (Roose et al., 2019).

6.3.3.3 Verticality

Verticality influences construal level (Aggarwal & Zhao, 2015; Slepian et al., 2015). In visual communication, verticality is a dichotomous construct: high verticality is a combination of high vertical position with downward visual angle and low verticality is a combination of low vertical position with upward visual angle.

This, this thesis also considers measurement of perceived verticality as a control variable.

Participants rate **"To what extent did you imagine being underground vs. above ground," "To what extent did you imagine being somewhere low vs. somewhere high," and "To what extent did you imagine being below the surface vs. higher up." On a 7-point sematic differential scale** (Roose et al., 2019).

6.3.3.4 Mood, arousal, and power

Mood, arousal, and power are considered as potential covariates too. It is believed that an increase in vertical position might elicit a more positive mood that might increase construal level. A high-up position is associated with positively valenced words (e.g., good), and a down-low position is associated with negatively valenced words (e.g., bad) (Meier & Robinson, 2005). Also, a positive mood leads to more abstract processing, a high-level construal (Gasper & Clore, 2002). In addition, an increase in perceived vertical position might increase power perceptions (Jami, 2019). And power perception is also believed to increase construal level (Smith & Trope, 2006). Meanwhile, Slepian et al. (2015) and Roose et al. (2019) suggest that mood, arousal, and power might be induced by visual experiences such as visual angles and vertical positions. Thus, mood, arousal, and power will be statistically controlled.

Three single-item scales are used to measure mood, arousal, and power. Originated from the Self-Assessment Manikin (SAM) by Bradley and Lang (1994), SAM is designed to measure emotions, particularly mood, arousal, and power. **Participants rate their mood, arousal, and power by selecting how they felt on three nine-point scales, with anchors set at 1 (very unpleasant) and 9 (very pleasant); 1 (calm) and 9 (excited); 1 (very powerless) and 9 (very powerful)**. The three single-item instruments have been validated in cross-cultural studies and across ages (e.g., Backs et al. (2005); Morris (1995)). Additionally, previous studies on the antecedents of construal level also adopted this instrument to measure mood, arousal, and power (e.g., Roose et al. (2019); Slepian et al. (2015)).

6.3.3.5 Involvement

Involvement with the landscape sceneries depicted in the landscape photos will be controlled. Involvement is characterised as the degree of personal relevance and information processing (Petty & Cacioppo, 1981; Rossiter et al., 1970). A higher involvement with the landscape scenery presented in photos may increase photo deliberation. The deliberation or effortful processing might increase the utilisation of low-level information of the scenery, thus, decrease construal level (Trope & Liberman, 2010). Also, because involvement represents cognitive and affective components (Ajzen, 1991; Zaichkowsky, 1994), and it is possible that affects and construal level are related (Williams & Bargh, 2008; Williams et al., 2014), This study will statistically control involvement.

Involvement is measured by using the **Personal Involvement Inventory** developed by Zaichkowsky (1994). The Personal Involvement Inventory is a context-free instrument that can be applied to measure involvement with products, with ads, or with purchase situations (Zaichkowsky, 1994). The Personal Involvement Inventory is shown in Appendix C.

6.3.3.6 Familiarity

Participants knowledge and familiarity with the scenery presented in the photo might bias the information processing styles (e.g., abstract and concrete) that influence construal level (Aggarwal & Zhao, 2015). Thus, familiarity with the scenery will be statistically controlled.

Familiarity is measured by three 10-point three-item scales, participants to indicate **"How familiar are you with this beach?", "How much do you know about this beach?" and "How often do you think about this beach?" from 1 (Never) to 10 (Always)** (Aggarwal & Zhao, 2015).

6.3.3.7 Demographics

Demographic information provides data regarding the participants, which determines whether the individuals in the sample are representative sample of the target population (Salkind, 2010). Demographics cannot be manipulated, and they normally include gender, age, marital status, year of education, etc. With respect to demographic information, researchers should only collect what is necessary for the specific purpose of the research (Salkind, 2010). On this basis, this thesis does not consider any demographic information might influence the trajectory of research design or findings. Therefore, following convention of visual communication studies (e.g., Aggarwal and Zhao (2015); Roose et al. (2019); Slepian et al. (2015)), this thesis will collect and statistically control gender, age, and marital status.

Hence, participants to report:

Gender: Male, Female, and Not specified

Age: age range above 18

Marital status: Married, Widowed, Divorced, Separated, Single, and Prefer not to say.

6.3.4 Summary of measurement instruments

Table 16 provides a summary of measurement instruments.

Table 16: Overview of variables, measurement items, and sources of measurement instrument (Study 2)

	Variables	Instruments	Source
Independent variables (Manipulated)	Perceived vertical position (Manipulation check)	"When watching this photo, how high does this picture make you feel?" from 1 (very low) to 10 (very high).	Aggarwal and Zhao (2015), Slepian et al. (2015), and Jami (2019))

<table>
<tr><td>Dependent variables (Measured)</td><td>Construal level</td><td>Category Inclusiveness Task (See Appendix B):
Please indicate the extent to which the following three objects can represent FURNITURE? 1 (definitely does not belong) to 10 (definitely does belong)
<table><tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr><tr><td>Chair</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Lamp</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Telephone</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table></td><td>Jami (2019), Rosch (1975), Roose et al. (2019), and Slepian et al. (2015),</td></tr>
<tr><td rowspan="6">Control variables (Measured)</td><td>Visual distance</td><td>“When watching this photo, how far away do you feel this scene is from you?” on a 10-point Likert-type scale from 1(very near) to 10 (very far).</td><td>Aggarwal and Zhao (2015) and Kim et al. (2019))</td></tr>
<tr><td>Visual angle</td><td>“To what extent do you imagine looking down versus looking up” on a seven-point bipolar scale from 1 (looking down) to 7 (looking up)</td><td rowspan="2">Roose et al. (2019)</td></tr>
<tr><td>Verticality</td><td>“To what extent did you imagine being underground versus above ground,” “To what extent did you imagine being somewhere low versus somewhere high,” and “To what extent did you imagine being below the surface versus higher up.” On a 7-point sematic differential scale.</td></tr>
<tr><td>Mood, arousal, and power</td><td>Participants rated their mood, arousal, and power/dominance selecting how they felt on nine-point scales, with anchors set at 1 (very unpleasant) and 9 (very pleasant); 1 (calm) and 9 (excited); 1 (very powerless) and 9 (very powerful)</td><td>Bradley and Lang (1994), Roose et al. (2019), and Slepian et al. (2015)).</td></tr>
<tr><td>Involvement</td><td>Personal Involvement Inventory (See Appendix C)</td><td>Zaichkowsky (1994)</td></tr>
<tr><td>Familiarity</td><td>“How familiar are you with this beach?”, “How much do you know about this beach?” and “How often do you think about this beach?” from 1 (Never) to 10 (Always)</td><td>Aggarwal and Zhao (2015)</td></tr>
<tr><td>Demographics</td><td>Gender: Male, Female, and Not specified
Age: age range above 18
Marital status: Married, Widowed, Divorced, Separated, Single, and Prefer not to say.</td><td></td></tr>
</table>

6.4 Study design

6.4.1 One-way between-subject experimental design

Following the between-subject experimental design mentioned in the overall methodology, Study 1 uses a one-way between-subject experimental design because perceived vertical position is the only independent variable (IV). The levels of the IV represent groups/conditions, and participants in different conditions are exposed to the stimulus that is designed to manipulate the assigned level of IV (Guarino et al., 2008). Study 1 has only one IV — perceived vertical position, and the perceived vertical position in Study 1 has two levels: high and low. Thus, this thesis uses a one-way between-subject design to investigate whether the change in levels of the independent variable (i.e. from a low vertical position to a high vertical position) would lead to changes in an outcome (i.e. construal level).

The experiment consists of two conditions in accordance with the levels of the independent variable. Participants in the high vertical position condition receive treatment that induces a perceived high vertical position (Figure 19 (d)). And participants in the low vertical position condition receive treatment that induces a perceived low vertical position (Figure 19 (b)). As examined in the Pretest, experimental materials are presented in Figure 21.

In line with the overall methodology, Study 1 uses a scenario experiment to test the effect of perceived vertical position on construal level. Because scenario experiments are lab-based, their high internal validity helps to establish causal relationships. And scenario experiments have been widely adopted in relevant marketing research (e.g., Aggarwal and Zhao (2015); Jami (2019); Roose et al. (2019)). In this scenario experiment, participants will be instructed to imagine that they are planning a vacation trip to a beach, and they have encountered an advertising photo of a newly discovered beach. The beach has a fictitious name called ECHUCA,

adopted from Aggarwal and Zhao (2015). After the scenario, participants will be asked to evaluate the advertising photo only.

6.4.2 Participants

Ninety (90) participants were recruited from Prolific.

6.4.3 Procedures

In line with the experimental design, the procedures are summarised in Figure 20.

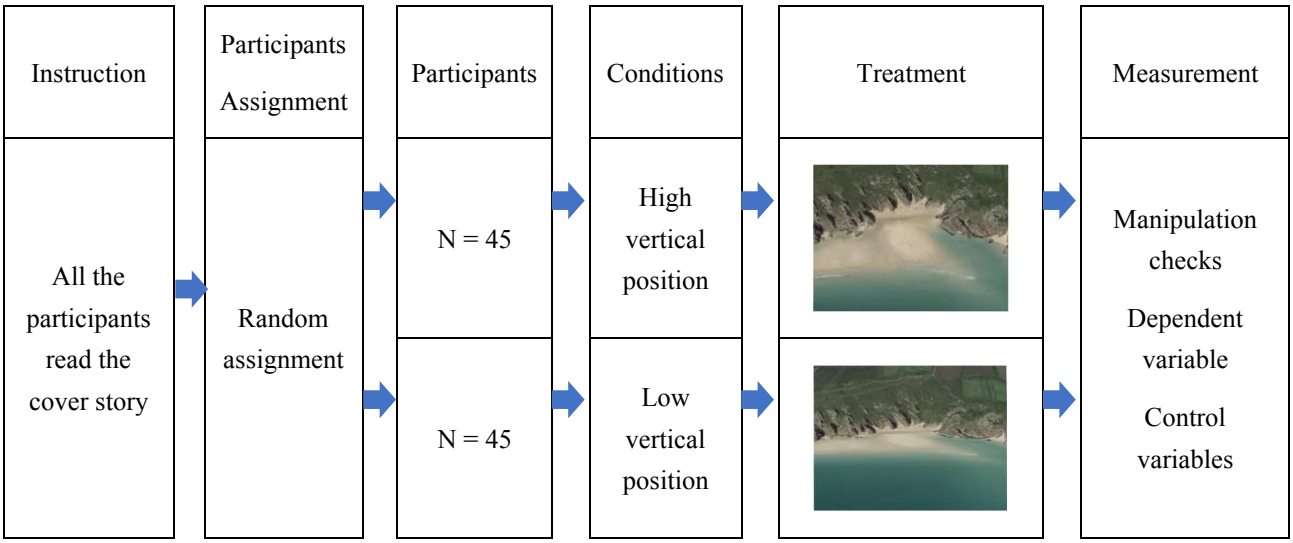


Figure 20: Overview of experimental procedures (Study 2)

The scenario-based experiment begins with a cover story. A cover story is presented to all the participants before assigning them to experimental conditions. The cover story reads:

"Please imagine that you are planning a vacation trip to a beach. As the photo shows, a tourist company discovered a new beach and named it ECHUCA. This company took a photo for ECHUCA beach and the company is interested in obtaining some feedback from customers about this advertising photo before releasing the advertisement. Please watch the photo and give feedback as if you are a customer."

After the cover story, participants were randomly assigned to either one of the two conditions: low vertical position condition (N = 45) or high vertical position condition (N = 45). In the low vertical position condition, participants were presented with a landscape photo of a beach (Figure 21 (a)). Participants in the high vertical position condition were presented with another photo of the same beach taken from a higher vertical position (Figure 21 (b)).

Figure 21: Visual manipulation of vertical positions (Study 2)

Visual manipulations of low vertical position

(a)

Visual manipulations of high vertical position

(b)

After exposure to experimental stimuli, manipulation checks of the independent variable, measurements of the dependent variable, and measurements of the control variables were administered. Participants were firstly asked to evaluate perceived vertical position (IV) when they view the photo by answering "How high does this photo of the beach make you feel?" on a 10-point Likert-type scale (1= very low, 10= very high) (Aggarwal & Zhao, 2015).

In terms of the potential confounding stylistic properties, participants were then asked to report the perceived visual distance from the landscape photo on a single item scale "When watching this photo, how far away do you feel this beach is from you?" on a 10-point Likert-type scale (1= very near, 10= very far) (Aggarwal & Zhao, 2015). Participants were also asked to report the perceived visual angle by answering "To what extent do you imagine looking down versus looking up" on a seven-point

bipolar scale from 1 (looking down) to 7 (looking up) (Roose et al., 2019). And participants were asked to evaluate perceived verticality by answering "To what extent did you imagine being underground versus above ground," "To what extent did you imagine being somewhere low versus somewhere high," and "To what extent did you imagine being below the surface versus higher up." on a 7-point sematic differential scale (Roose et al., 2019).

As for the measurement of construal level (DV), participants were instructed to complete an ostensibly irrelevant Category Inclusiveness Task. The task includes three typical exemplars of four categories (furniture, weapon, toy, and vehicle) to measure construal level (Appendix B) (Isen & Daubman, 1984). The higher the score, the higher the construal level.

In addition, concerning other control variables, participants will also be asked to evaluate their mood, arousal, and power when watching the photo by answering "How do you feel right now?" on three 9-point bipolar scales: (1) from 1 = "Very unpleasant" to 9 = "Very pleasant", (2) from 1 = "Calm" to 9 = "Excited", and (3) from 1 = "Very powerless" to 9 = "Very powerful") (Bradley & Lang, 1994; Slepian et al., 2015).

Finally, participants were asked to provide demographic information and evaluate their involvement with the beach; and familiarity with the beach called ECHUCA.

6.4.4 Data collection

A questionnaire was administered via Qualtrics (Appendix D).

6.4.5 Data analysis

Study 1 is a between-subject design testing the effect of two levels of an independent variable (i.e. perceived vertical position) on one continuous dependent variable (i.e. construal level). Thus, Study 1 will use ANOVA/ANCOVA to determine

whether the two levels of perceived vertical position have a significant main effect on changes in construal level.

6.5 Results

6.5.1 Participants

After the data collection and data cleaning procedures, out of 90 recruited participants, 83 participants were retained, 7 participants were removed due to short response times. The demographic breakdown is presented in Table 17.

This table demonstrates that the sample is balanced across the two experimental conditions, which helps ensure that any observed effects are due to the manipulation of the independent variable rather than confounding factors related to demographic differences between groups.

Table 17: Sample profile (Study 2)

		Total	**Low vertical position condition**	**High vertical position condition**
Sample Size:		**N = 83**	**N = 42**	**N = 41**
Variables:				
Age:				
	Under 18	0	0	0
	18-24	24	9	15
	25-34	31	16	15
	35-44	16	8	8
	45-54	7	6	1
	55-64	4	3	1
	65-74	0	0	0
	75-84	0	0	0
	85 or older	0	0	0
	Prefer not to say	1	0	1

Gender				
	Male	23	11	12
	Female	58	31	27
	Prefer not to say	2	0	2
Marital Status				
	Married	24	17	7
	Widowed	2	1	1
	Divorced	3	2	1
	Separated	2	1	1
	Never married	50	20	30
	Prefer not to say	2	1	1

6.5.2 Measurement scales

Table 18 shows the reliability check of multi-item measurement scales. The satisfactory reliability threshold is met for all scales, with Cronbach's alpha values greater than 0.7 (Cronbach, 1951). This indicates that the scales are reliable for measuring the intended constructs, strengthening the validity of the study's findings.

Table 18: Reliability check of measurement scales (Study 2)

Measurement	Cronbach's α	Mean	SD
Involvement: 10 items	0.918	5.367	1.032
Verticality: 3 items	0.788	5.900	1.205
Familiarity: 3 items		1	0

6.5.3 Descriptive statistics

6.5.3.1 Manipulation check

- ***Perceived vertical position***

Manipulation checks using ANOVA revealed a significant difference between both conditions on in terms of perceived vertical position ($F(1, 81) = 6.845$, $p = 0.011$). Participants in the low perceived vertical position condition reported a lower level of perceived vertical position ($M_{low} = 7.21$, $SD_{low} = 1.54$) than those participants in the high perceived vertical position condition ($M_{high} = 8.05$, $SD_{high} = 1.40$). The results suggest that the manipulation was successful.

6.5.3.2 Control variables

Table 19 demonstrates that all the proposed control variables between the conditions are statistically controlled, as their p-values are all above the threshold ($\alpha = 0.05$). This indicates that there are no significant differences between the conditions with respect to the control variables, ensuring that any observed effects on the dependent variable are likely attributable to the independent variable, rather than these control variables.

Table 19: Control variables (Study 2)

Variables	Descriptive statistics	F statistics	*p* value	Controlled
Visual angle	M_{low} = 2.98, SD_{low} = 1.969, M_{high} = 2.68, SD_{high} = 1.877	F(1, 81) = 0.482	0.490	Yes
Verticality	M_{low} = 5.873, SD_{low} = 1.323, M_{high} = 5.927, SD_{high} = 1.090	F(1, 81) = 0.041	0.840	Yes
Visual distance	M_{low} = 7.45, SD_{low} = 2.340 M_{high} = 8.00, SD_{high} = 1.860	F(1, 81) = 1.391	0.242	Yes
Mood	M_{low} = 7.31, SD_{low} = 1.388, M_{high} = 7.22, SD_{high} = 1.370	F(1, 81) = 0.088	0.767	Yes
Arousal	M_{low} = 4.76, SD_{low} = 2.367, M_{high} = 4.68, SD_{high} = 2.371	F(1, 81) = 0.023	0.880	Yes
Power	M_{low} = 4.69, SD_{low} = 1.583, M_{high} = 5.27, SD_{high} = 0.917	F(1, 81) = 2.800	0.093	Yes
Involvement with Beach	M_{low} = 5.37, SD_{low} = 1.080, M_{high} = 5.36, SD_{high} = 1.000	F(1, 81) = 0.001	0.972	Yes
Familiarity	All the participants reported that they were not familiar with a beach called ECHUCA.			Yes
Demographics	As shown in Table 17, demographic distributions are relatively equal between groups.			Yes

6.5.4 Hypothesis testing

ANOVA results further showed a significant main effect of perceived vertical position on construal level (F(1, 81) = 6.366 p = 0.014). Simple analysis indicated that participants in the low perceived vertical position condition reported a lower construal level (M_{low} = 6.88, SD_{low} = 0.68) than those participants in the high perceived vertical position condition (M_{high} = 7.32, SD_{high} = 0.89). These results demonstrate that the direction of changes in construal level is consistent with Hypothesis 1, which posits that perceived vertical position is positively related to consumers' construal level.

Thus, H1 is supported.

6.6 Discussion

The results from this study provide strong evidence for the positive influence of perceived vertical position on construal level, supporting H1. Specifically, the results

demonstrate that an increase in perceived vertical position increases consumers' degree of abstractness in processing style (construal level). As a result, these results firstly contribute to the literature in visual antecedents of construal level by proposing a new visual antecedent of construal level (Table 3).

More importantly, the results showcase an independent effect of vertical position on construal level. Specifically, a pretest firstly ruled out the possible extraneous effect such as visual angle and visual distance. The main study then demonstrates that perceived vertical position influence construal level independently from perceived visual angle, perceived visual distance, perceived verticality, mood, arousal, and power. Therefore, the results further address the controversies that exist in visual antecedents of construal level (Table 4).

The findings lead to the following arguments:

First, vertical position can be perceived, and it is an independent construct. Specifically, the controlled psychometric measurements of verticality, visual angle, and visual distance shows that the effect of vertical position cannot be explained using the conceptualisation of verticality (e.g., Aggarwal and Zhao (2015)). This suggests that the perception of vertical position is not related to changes in verticality or visual angle, which support the argument by Orth et al. (2020) and Roose et al. (2019) that using verticality to explain the effect of either vertical position or visual angle can be problematic. With regard to the controlled visual distance, the findings also support the argument that vertical position cannot be explained by using the intuitive "spatial distance dimension" in CLT. The controlled perceived visual distance supports this argument by showing that changes in vertical positions do not mean changes in visual distance that is between the "perceiver" and the "event." As a result, the mechanism of the effect of vertical position on construal level need to be scrutinised further.

Second, the findings refute the results found by Jami (2019), claiming that the "sense of coherence" should diminish the effect of perceived vertical position on construal level in landscape photos. This study shows that the controlled visual distance controls perceptual scope associated with it, and the effect of vertical position

on construal level still holds. The results further supported Slepian et al. (2015) that perceptual scope is not the underlying mechanism of the effect of perceived vertical position on construal level.

6.7 Chapter conclusion

In summary, this chapter presented the design of an experimental study to examine the effect of perceived vertical position on construal level, independent from perceived verticality, perceived visual angle, and perceived visual distance. The goal was to test H1 and address RQ2.

A new visual manipulation of vertical position as well as construal level was proposed, with a pretest rigorously examining the manipulation of low and high perceived vertical positions while controlling perceived visual distance, perceived visual angle, and perceived verticality.

A one-way between-subject experimental design was implemented, revealing a significant and positive effect of perceived vertical position on construal level (consumers' abstract processing style). The experimental findings then supported H1 and answered RQ2.

As a result, future studies will delve deeper into the relationship between perceived vertical position and construal level, specifically examining the underlying mechanism of this effect (Study 3). Furthermore, the effect discovered in this study supports the adoption of congruence in construal level framework to explain advertising effectiveness in Study 4.

The outcomes of this chapter guide the development of the following studies:

1. The mechanism underlying the effect of vertical position on construal level remains unknown. Thus, this thesis is intended to make theoretical contributions by testing the mediator of this focal relationship (Study 3).

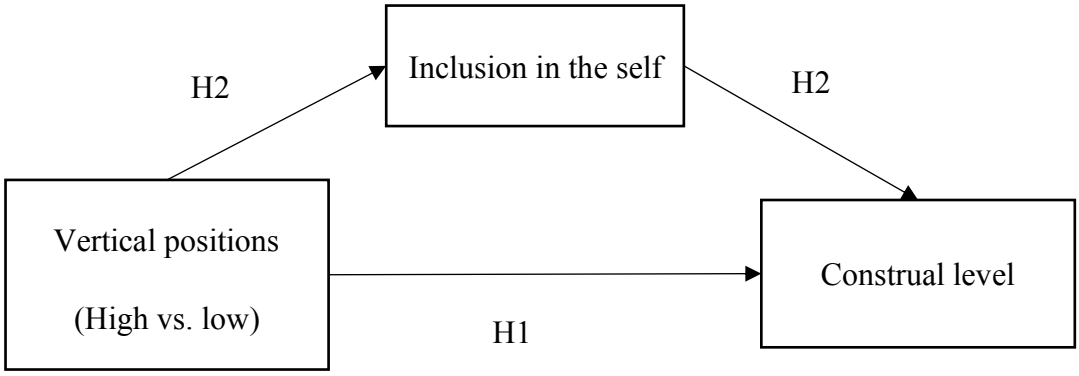
2. Since perceived vertical position in landscape photos influences consumers' construal level, it is appropriate to adopt the framework of congruence in construal level. Therefore, this thesis proceeds the investigation of advertising effectiveness (Study 4) using the framework of congruence in construal level.

Chapter 7: Study 3 – Inclusion in the Self Explains the Effect of Perceived Vertical Position on Construal Level

Chapter Content

7.1 Chapter introduction

This chapter investigates the underlying mechanism that explains the effect of perceived vertical position on construal level. This chapter presents the design and findings of Study 3,which aim to answer RQ3: If vertical position influences construal level, what is the underlying mechanism? This study tests Hypothesis 2: The effect of perceived vertical position in landscape photos on consumers' construal level is mediated by the inclusion in the self.



This chapter outlines the experimental design of Study 3. Section 7.3 provides explanations and justifications regarding variables, instrumentations, and materials. Then, Section 7.4 presents the study designs, including experimental design, participants, procedures, data collection, and data analysis. Notably, this section demonstrates how this study design approaches to test the mediating role of inclusion in the self.

Then, Section 7.5 presents the result of Study 3, covering participants demographic breakdown, measurement scales, descriptive statistics. Critically, using Hayes's Model 4 mediation model, this study showcases that the inclusion in the self partially mediates the effect of perceived vertical position on construal level, supporting H2.

Section 7.6 draws inferences from the results and presents the discussion regarding the mediating role of inclusion in the self in explaining the effect of vertical position on construal level.

Finally, Section 7.7 concludes the chapter.

7.2 Purpose

Study 3 aims to investigate the underlying mechanism of the effect of perceived vertical position on construal level by examining the mediating role of the inclusion in the self. By doing so, this study seeks to answer RQ3: If vertical position influences construal level, what is the underlying mechanism?

7.3 Variables, instrumentation, and materials

7.3.1 Independent variable

Perceived vertical position is the sole independent variable. The experimental stimuli used to manipulate perceived vertical position are the same as those in Study 2. Additionally, the measurement scales for perceived vertical position remain consistent with those employed in Study 2.

7.3.2 Dependent variable

Construal level is the sole dependent variable. And it is measured by the conventional construal level measurement instrument —— **Category Inclusiveness Task** (Appendix B) (Isen & Daubman, 1984).

7.3.3 Mediator – Inclusion in the self

The hypothesised mediator in Study 3 is the inclusion of landscape in the self, in short, inclusion in the self. The mediator variable serves to clarify the mechanism and

nature of the relationship between the independent variable and the dependent variable (MacKinnon, 2012). Mediation suggests that the independent variable influences a mediator, which in turn influences the dependent variable, rather than having a direct causal relationship between the independent variable and the dependent variable. The mediator, therefore, contributes to a better understanding of the relationship between variables when there is no obvious direct connection (MacKinnon, 2012). More importantly, the mediator is considered a significant theoretical contribution because the mediating variable aims at validating theories explaining "why" a phenomenon emerges (Whetten, 1989).

The inclusion in the self scale is designed to capture people's sense of being interconnected with the object (e.g., landscape) that they extend to. The concept of the inclusion is reflected by the degree of overlapping representations of the self and the objects. Hence, the inclusion is commonly captured by a single-item pictorial measure that visually depicts the degrees of overlap between the perceiver and the object. As shown in Figure 22, the scale begins with an instruction that leads participants to read a set of Venn-like diagrams, each diagram represents the different degree of overlap between two circles, one circle indicates the self and another is the object that one extends to, in the case of this thesis, another object is landscape. The degree of overlap progresses in a linear manner, indicating increasing degree of inclusion, creating a seven-step interval-level scale, which resembles a seven-point scale (Aron et al., 1992; Aron et al., 1991).

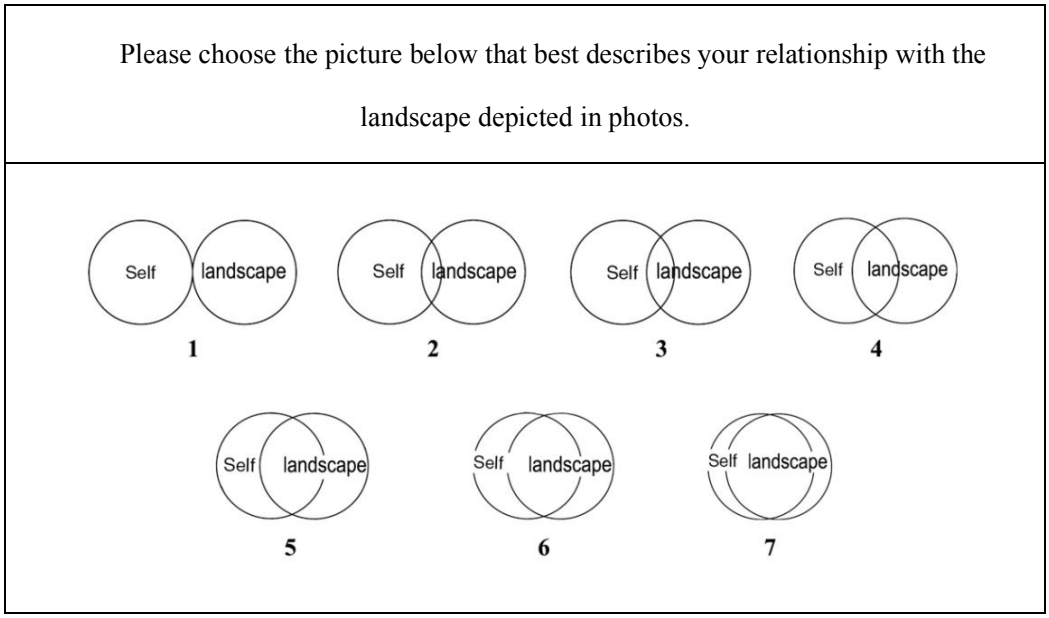


Figure 22: The inclusion in the self scale (Mayer & Frantz, 2004; Schultz, 2002)

The inclusion in the self scale has been adapted to measure inclusion with various objects in the self. It was initially developed to measure inclusion between people, the scale was named to reflect connectedness, love, the inclusion of others in the self, interpersonal similarity, closeness, or oneness between one and another (Aron et al., 1992; Aron et al., 1991; Aron & Tomlinson, 2018; Cialdini et al., 1997; Liviatan et al., 2008). Modified versions of the scale have also been adapted to capture inclusion of a community in the self, showcasing the extent to which one perceives being connected to or as a part of a community (Folk et al., 2016; Mashek et al., 2007). Additionally, modified versions of the scale have been employed to capture the relationship between people with nature under the names such as inclusion of nature in the self (Mayer & Frantz, 2004; Schultz, 2002) or relatedness with nature (Weinstein et al., 2009).

The primary difference between the original and the modified versions lies in the name of the circle that represents the object. Following the essence of the inclusion in the self, this thesis suggests that the inclusion in the self scale can be adapted to fit into the research context by changing the name of the circle into “landscape” (Figure 22).

7.3.4 Control variables

Control variables in Study 3 are the same as those in Study 2, and their corresponding measurement instruments are listed in Table 20.

7.3.5 Summary of measurement instruments

Table 20 provides a summary of measurement instruments used in Study 3.

Table 20: Overview of variables, measurement items, and sources of measurement instrument (Study 3)

<table>
<tr><th></th><th>Variables</th><th>Instruments</th><th>Source</th></tr>
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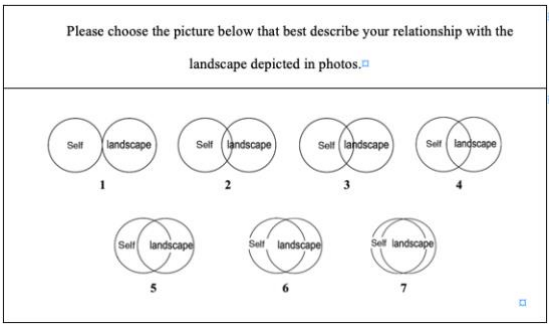
<table><tr><th></th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th></tr><tr><td>Chair</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Lamp</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Telephone</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table></td><td>Jami (2019), Rosch (1975), Roose et al. (2019), and Slepian et al. (2015),</td></tr>
<tr><td>Mediator (Measured)</td><td>Inclusion in the Self</td><td> 
</td><td>(Aron et al., 1992; Aron et al., 1991; Cialdini et al., 1997; Liviatan et al., 2008; Mayer & Frantz, 2004; Schultz, 2002)</td></tr>
<tr><td rowspan="2">Control variables (Measured)</td><td>Visual distance</td><td>“When watching this photo, how far away do you feel this scene is from you?” on a 10-point Likert-type scale from 1(very near) to 10 (very far).</td><td>Aggarwal and Zhao (2015) and Kim et al. (2019))</td></tr>
<tr><td>Visual angle</td><td>“To what extent do you imagine looking down versus looking up” on a seven-point bipolar scale from 1 (looking down) to 7 (looking up)</td><td>Roose et al. (2019)</td></tr>
</table>

	Verticality	"To what extent did you imagine being underground versus above ground," "To what extent did you imagine being somewhere low versus somewhere high," and "To what extent did you imagine being below the surface versus higher up." On a 7-point sematic differential scale.	
	Mood, arousal, and power	Participants rated their mood, arousal, and power/dominance selecting how they felt on nine-point scales, with anchors set at 1 (very unpleasant) and 9 (very pleasant); 1 (calm) and 9 (excited); 1 (very powerless) and 9 (very powerful)	Bradley and Lang (1994), Roose et al. (2019), and Slepian et al. (2015)).
	Involvement	Personal Involvement Inventory (See Appendix C)	Zaichkowsky (1994)
	Familiarity	"How familiar are you with this beach?", "How much do you know about this beach?" and "How often do you think about this beach?" from 1 (Never) to 10 (Always)	Aggarwal and Zhao (2015)
	Demographics	Gender: Male, Female, and Not specified Age: age range above 18 Marital status: Married, Widowed, Divorced, Separated, Single, and Prefer not to say.	

7.4 Study design

7.4.1 One-way between-subject experimental design

Study 3 employs a one-way between-subject experimental design. The independent variable is perceived vertical position, with two levels (high vs. low), and the dependent variable is construal level, a continuous variable. Thus, the experiment consists of two conditions: participants in the low vertical position condition receive treatment that induces a perceived low vertical position (Figure 21 (a)), while participants in the high vertical position condition receive treatment that induces a perceived high vertical position (Figure 21 (b)). In Study 3, the mediator is inclusion in the self, which will be measured after consumers are exposed to the experimental stimuli.

7.4.2 Participants

Eighty (80) participants were recruited from Prolific.

7.4.3 Procedures

The experimental procedures are summarised in Figure 23.

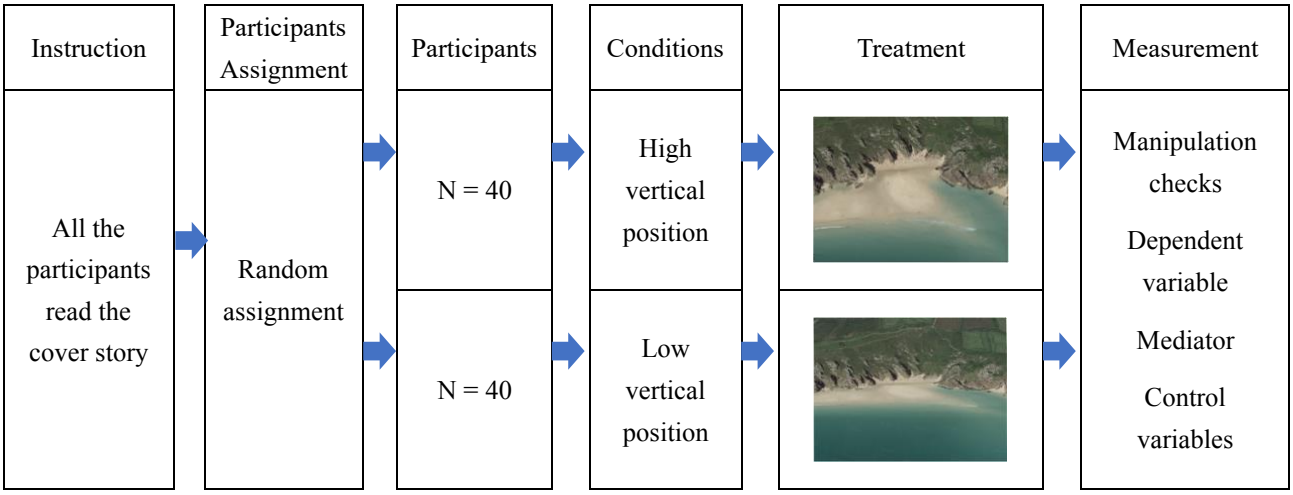


Figure 23: Overview of experimental procedures (Study 3)

The scenario-based experiment begins with a cover story, which is the same as in Study 2. After the cover story, participants were randomly assigned to either one of the two conditions: low vertical position condition (N = 40) or high vertical position condition (N = 40). In the low vertical position condition, participants were presented with a landscape photo of a beach (Figure 21 (a)). Participants in the high vertical position condition were presented with another photo of the same beach taken from a higher vertical position (Figure 21 (b)).

Following exposure to experimental stimuli, manipulation checks of independent variable(s), measurement of the mediator, measurements of dependent variable(s), and measurements of control variables were administered. Participants were firstly asked to evaluate perceived vertical position (IV) when viewing the photo by answering "How high does this photo of the beach make you feel?" on a 10-point Likert-type scale (1= very low, 10= very high) (Aggarwal & Zhao, 2015).

For the mediator, participants were presented with the inclusion in the self scale (Figure 22) and were instructed to choose the picture (from 1 to 7) that best describes their relationship with the landscape depicted in the landscape photo.

Regarding the measurement of construal level (DV), participants were instructed to complete an ostensibly irrelevant Category Inclusiveness Task, which includes three typical exemplars in four categories (furniture, weapon, toy, and vehicle) to measure construal level (Appendix B) (Isen & Daubman, 1984). The higher the score, the higher the construal level.

In terms of the potential confounding stylistic properties, participants were then asked to report the perceived visual distance from the scene on a single item scale "When watching this photo, how far away do you feel this beach is from you?" on a 10-point Likert-type scale (1= very near, 10= very far) (Aggarwal & Zhao, 2015). Participants were also asked to report the perceived visual angle by answering "To what extent do you imagine looking down versus looking up" on a seven-point bipolar scale from 1 (looking down) to 7 (looking up) (Roose et al., 2019). And participants were asked to evaluate perceived verticality by answering "To what extent did you imagine being underground versus above ground," "To what extent did you imagine being somewhere low versus somewhere high," and "To what extent did you imagine being below the surface versus higher up." on a 7-point sematic differential scale (Roose et al., 2019).

In addition, concerning other control variables, participants were also asked to evaluate their mood, arousal, and power when watching the photo by answering "How do you feel right now?" on three 9-point bipolar scales: (1) from 1 = "Very unpleasant" to 9 = "Very pleasant", (2) from 1 = "Calm" to 9 = "Excited", and (3) from 1 = "Very powerless" to 9 = "Very powerful") (Bradley & Lang, 1994; Slepian et al., 2015).

Finally, participants were asked to provide demographic information and evaluate their involvement with the beach; and familiarity with the beach called ECHUCA.

7.4.4 Data collection

A questionnaire was administered via Qualtrics (Appendix E).

7.4.5 Data analysis

The data analysis includes a mediation test to examine the underlying mechanism of the effect of perceived vertical position on construal level. Hayes (2017)' s Model 4, or simple mediation model (Figure 24), examines that the effect of X on Y occurs through the mediating variable —— M. In this model, X represents the predictor variable or independent variable, Y represents the outcome variable or dependent variable, M is the mediating variable or mediator, **c'** is the direct effect of X on Y, **a*b** is the indirect effect from X to Y via M, and **c** is the total effect of X on Y. This model is suitable of examining dichotomous independent variable X (two levels of perceived vertical position), continuous dependent variable Y (construal level), and continuous variable M (inclusion in the self), making it appropriate for this study (Hayes, 2017).

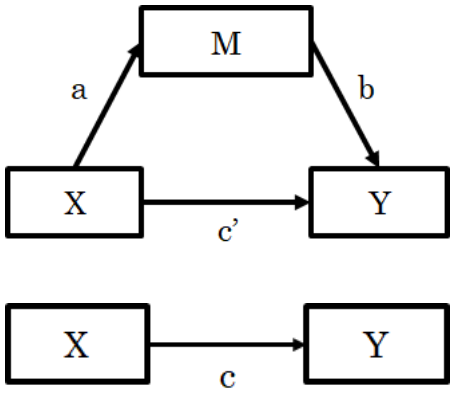


Figure 24: Diagrams explaining simple mediation model (Model 4) adapted from Hayes (2017)

This model proposes that X can influence Y through two possible paths: one is the direct (c') effect, another is an indirect effect (a*b) through M (Iacobucci et al., 2007). To examine the mediating effect, this model suggests that the total effect between X and Y should be established first (i.e. c = c' + a*b is significant), which has been validated in Study 2 and will be revalidated in this study. Based on this, two

types of mediation can emerge: full mediation, which indicates that a mediator entirely explains the relationship between the independent and dependent variables (i.e. c' becomes insignificant when a*b is significant), and partial mediation, which suggests that the mediator partially explains the relationship between the independent and dependent variables, and there still exists an undiscovered statistical relationship between the independent and dependent variables (i.e. c' and a*b are both significant). Both types of mediation validate the proposed mechanism (M) (Hayes, 2017; Zhao et al., 2010).

The SPSS PROCESS macro is used to perform the mediation test (Hayes, 2017), and this thesis follows Preacher and Hayes (2004)'s bootstrapping method to test the significant level of the hypothesised effects. The data analysis performed a bootstrapping resampling technique (5000 samples) with bias-corrected, 95% confidence intervals to calculate the significance level of the hypothesised paths in the mediation model.

7.5 Results

7.5.1 Participants

After the data collection and cleaning procedures, 80 participants were retained. The demographic breakdown is presented in Table 21, this table demonstrates that the sample is balanced across the two experimental conditions, which helps ensure that any observed effects are due to the manipulation of the independent variable.

Table 21: Sample profile (Study 3)

		Total	Low vertical position condition	High vertical position condition
Sample Size:		**N = 80**	**N = 40**	**N = 40**
Variables:				
Age:				
	Under 18	0	0	0
	18-24	20	8	12
	25-34	27	14	13
	35-44	22	12	10
	45-54	6	3	3
	55-64	4	3	1
	65-74	1	0	1
	75-84	0	0	0
	85 or older	0	0	0
	Prefer not to say	0	0	0
Gender				
	Male	39	21	18
	Female	40	19	21
	Prefer not to say	0	0	1
Marital Status				
	Married	21	12	9
	Widowed	2	1	1
	Divorced	5	2	3
	Separated	2	1	1
	Never married	46	22	24
	Prefer not to say	4	2	2

7.5.2 Measurement scales

Table 22 shows that multi-item measurement scales all meet the satisfactory reliability threshold, as Cronbach's α > 0.7 (Cronbach, 1951).

Table 22: Reliability check of measurement scales (Study 3)

Measurement	Cronbach's α	Mean	SD
Involvement: 10 items	0.932	5.038	1.079
Verticality: 3 items	0.735	6.254	0.905
Familiarity: 3 items		1	0

7.5.3 Descriptive statistics

7.5.3.1 Manipulation check

- ***Perceived vertical position***

Manipulation check using ANOVA showed a significant difference between both conditions in terms of perceived vertical position ($F(1, 78) = 4.881$, $p = 0.030$). Participants in the low perceived vertical position condition reported a lower level of perceived vertical position ($M_{low} = 7.08$, $SD_{low} = 2.105$) than participants in the high perceived vertical position condition ($M_{high} = 7.95$, $SD_{high} = 1.358$), indicating a successful manipulation.

7.5.3.2 Control variables

As shown in Table 23, all the proposed control variables between conditions are statistically controlled, with p values all above $\alpha = 0.05$. This suggests that there are no significant differences between the experimental groups in terms of these control variables, ensuring that the observed effects are due to the manipulation of the independent variable.

Table 23: Control variables (Study 3)

Variables	Descriptive statistics	F statistics	*p* value	Controlled
Visual angle	M_{low} = 1.58, SD_{low} = 0.781, M_{high} = 1.75, SD_{high} = 1.296	F(1, 78) = 0.535	0.467	Yes
Verticality	M_{low} = 6.358, SD_{low} = 0.771, M_{high} = 6.15, SD_{high} = 1.021	F(1, 78) = 1.060	0.306	Yes
Visual distance	M_{low} = 7.43, SD_{low} = 1.852, M_{high} = 8.13, SD_{high} = 1.539	F(1, 78) = 3.380	0.070	Yes
Mood	M_{low} = 6.35, SD_{low} = 1.657, M_{high} = 6.53, SD_{high} = 1.724	F(1, 78) = 0.214	0.645	Yes
Arousal	M_{low} = 4.58, SD_{low} = 2.062, M_{high} = 5.08, SD_{high} = 2.141	F(1, 78) = 1.132	0.281	Yes
Power	M_{low} = 4.43, SD_{low} = 1.583, M_{high} = 4.68, SD_{high} = 0.917	F(1, 78) = 0.747	0.390	Yes
Involvement with Beach	M_{low} = 5.12, SD_{low} = 1.014, M_{high} = 4.96, SD_{high} = 1.150,	F(1, 78) = 0.465	0.497	Yes
Familiarity	All the participants reported that they were not familiar with a beach called ECHUCA.			Yes
Demographics	As shown in Table 21, demographic distributions are relatively equal between groups.			Yes

7.5.4 Hypothesis testing

ANOVA results firstly revealed that an increase in vertical positions has positive and significant effect on construal level (M_{low} = 6.579, SD_{low} = 0.581, M_{high} = 7.102, SD_{high} = 0.467, F(1, 78) = 19.682, $p < 0.001$), indicating that the total effect is significant.

More importantly, Figure 25 presents the results of mediation analysis. The results revealed that when including inclusion in the self as the mediator, *path a* shows that vertical position and inclusion in the self are significantly and negatively correlated (coeff = -1.025, $p < 0.01$) and *path b* shows that inclusion in the self and construal level are also significantly and negatively correlated (coeff = -0.256, $p < 0.01$). In total, the indirect effect of vertical position on construal level via inclusion in the self (a*b) is positively and significantly correlated (coeff = 0.2626, confidence interval: 5.0% = 0.117, 95% = 0.438), indicating the presence of a mediating effect. Also, the direct effect of vertical position on construal level (c') is still significant

(coeff = 0.2603, $p < 0.05$) with the presence of the mediator, indicating a partial mediation.

To summarise, an increase in perceived vertical position leads to a decrease in inclusion in the self, then the decrease in inclusion in the self further leads to an increase in construal level, and the inclusion in the self partially explains the effect of vertical position on construal level.

Thus, H2 is supported.

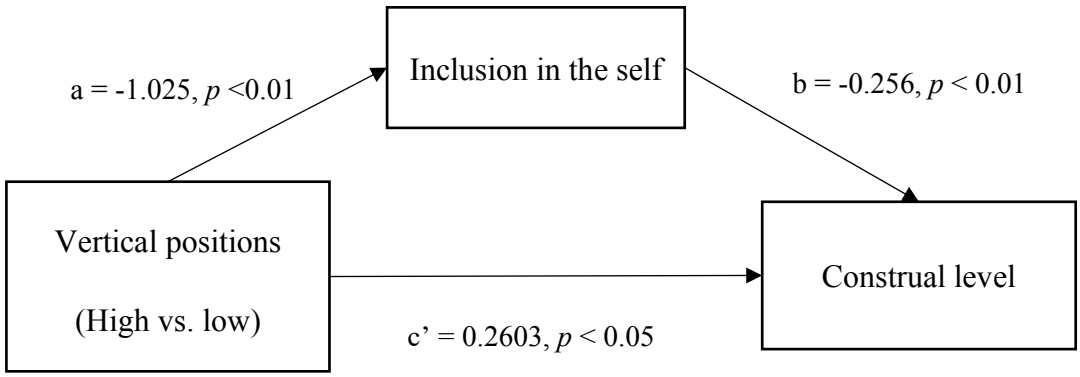


Figure 25: The effect of vertical position on construal level is significantly and partially mediated by inclusion in the self

7.6 Discussion

The results of Study 3 support H2 and provide evidence that the influence of vertical position on construal level is due to consumer' inclusion of landscape sceneries in the self. Specifically, Study 3 demonstrates that an increase in perceived vertical position not only increases construal level but also decreases the degree of inclusion in the self (i.e. how much people feel they are part of a landscape or feel that a landscape is part of their self-concept), which partially mediates the effect of vertical position on construal level. Furthermore, this study also ruled out possible extraneous confounds in visual perceptions such as perceived visual distance, perceived visual angle, and perceived verticality.

The findings have proven that inclusion in the self is a previously overlooked mechanism that explains the effect of vertical position on construal level, contributing to literature summarised in Table 3. In particular, the perceived vertical position induced by landscape photos lead to changes in how much people include the landscape in the self-concept, then the degree of inclusion decreases the construal level because people might attend to consider the landscape is "self-like" and more immediate. It is noteworthy that the partial mediation may be attributed to the existence of other unknown mechanisms. Hence, this study opens avenues for future studies to explore the potential underlying mechanisms.

7.7 Chapter conclusion

In conclusion, inclusion in the self partially mediates the effect of perceived vertical position on construal level, which supports H2 and answers RQ3. This chapter provided a detailed design and explanation regarding how inclusion in the self can be captured and tested in a one-way between-subject experimental design.

This study takes the perspective of the self-concept and proposed a previously overlooked construct —— inclusion in the self —— as an underlying mechanism that explains the effect of perceived vertical position on construal level (i.e. consumers' abstract processing style). Specifically, an experimental study revealed a significant indirect effect of perceived vertical position on construal level via inclusion in the self. And the effect is partially explained by inclusion in the self. The findings contribute to our understanding of the role of perceived vertical position in shaping consumers' construal level and highlight the importance of considering the inclusion in the self.

Building on the findings of Study 3, which demonstrated the significant effect of perceived vertical position on construal level and the partial mediation role of inclusion in the self, the next step in this research is to investigate the implications of these findings for advertising effectiveness. By understanding the relationship

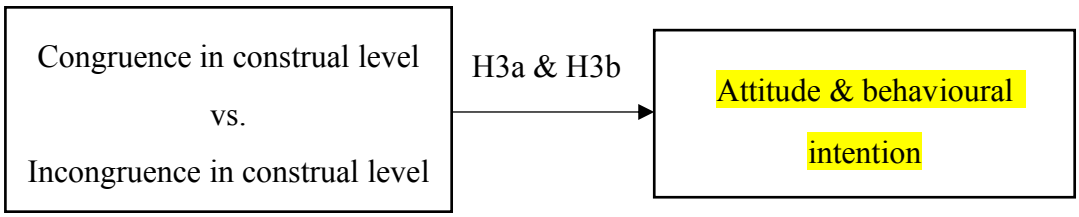
between perceived vertical position and construal level, marketers and advertisers can potentially design more effective campaigns through the framework of congruence in construal level. The following study aims to explore the practical applications of these findings and delve into the impact of vertical position on advertising effectiveness.

Chapter 8: Study 4 (a) – Matching Vertical Position and Dispositional Spatial Distance on Destination attitude and Intention to Visit

Chapter Content

8.1 Chapter introduction

This chapter investigates the interplay between landscape photos and a consumer factor (i.e. dispositional spatial distance) on advertising effectiveness, featuring a message-people congruence scenario. This chapter presents the design and findings of Study 4(a), which investigates the congruence effect between vertical position and another construal-representing factor on advertising effectiveness, addressing RQ5: Do vertical position with another construal-representing factor have a congruence effect on attitude and behavioural intention? and test H3a: Advertisements using landscape photos that evoke the same (vs. different) level of construal with a consumer factor increase consumers' overall attitude towards the advertised product, and H3b: Advertisements using landscape photos that evoke the same (vs. different) level of construal with a consumer factor increase consumers' behavioural intention towards the advertised product.



This chapter begins with detailed study designs of Study 4(a). Specifically, Section 8.3 provides explanations and justifications regarding variables, instrumentations, and materials. This section also includes a detailed **Pretest** to establish the experimental stimuli to manipulate one of the independent variables: dispositional spatial distance. Section 8.4 informs detailed study design, including experiment design, participants, experiment procedures, data collection and data analysis.

Then, Section 8.5 presents the result of Study 4(a), including participants demographic breakdown, measurement scales, descriptive statistics. ANOVA results

then shows that perceived vertical position and dispositional spatial distance have interactive effect on attitude and intention. Specifically, when perceived vertical position and dispositional spatial distance are congruent (i.e. both high/low on level of construal), consumers exhibited more favourable attitude and higher intention to visit the destination, supporting H3a and H3b.

Section 8.6 draws inferences from the findings and presents the discussion regarding how advertisers and marketers can use landscape photos to promote a destination when consumers plan to visit a nearby vs. distant location.

Finally, Section 8.7 concludes this chapter.

8.2 Purpose

The purpose of Study 4(a) is to examine advertising effectiveness in the message-people congruence scenario, which features personalised advertisement approach. This study examines the interplay between landscape photos and a consumer factor: dispositional spatial distance. The design of this study facilitates the understanding on which landscape photos of a new attraction (taken with low vs. high vertical position) should be distributed to potential visitors to yield the best destination attitude and intention to visit when the visitors already have a plan to travel to either a distant or a nearby destination. This study aims to answer RQ5: Do vertical position with another construal-representing factor have a congruence effect on attitude and behavioural intention? by testing H3a and H3b.

8.3 Variables, instrumentation, and materials

8.3.1 Independent variables

8.3.1.1 Perceived vertical position

- ***Manipulation of vertical position***

The manipulation of vertical position in Study 4(a) will use the same stimuli examined in Study 2, as presented in Figure 21.

- ***Measurement***

In line with Study 2, a straightforward single-item scale is used (e.g., Aggarwal and Zhao (2015); Slepian et al. (2015); Jami (2019)) as the manipulation check of perceived vertical position. Participants to indicate:

"When watching this photo, how high does this picture make you feel?"

from 1 (very low) to 10 (very high).

8.3.1.2 Perceived dispositional spatial distance

- ***Manipulation of dispositional spatial distance***

This study manipulates dispositional spatial distance by inducing consumers' feeling of having a planned trip to a nearby vs. distant location. According to Kim et al. (2016) and Wang and Lehto (2019), consumers envision a location is nearby vs. distant when they imagine having a travel plan to a nearby vs distant location. Hence, adapting vignettes from Kim et al. (2016) and Wang and Lehto (2019), this study uses a scenario-based experimental design to manipulate consumers' dispositional spatial distance to a nearby vs. distant location. In addition, consumers are also informed that there is a hypothetical destination named "Echuca" at this location, which will be the advertised destination in the main study.

- ***Stimuli development***

Following Kim et al. (2016) and Wang and Lehto (2019), the following two scenarios are used to manipulate dispositional nearby vs. distant spatial distance. The scenario that is used to manipulate dispositional nearby spatial distance in the nearby destination condition is:

> *"Imagine that you are planning a vacation trip to a **nearby** seaside city where you could **drive to within one hour**. There is a newly discovered beach called ECHUCA which is located within 30 minutes from the port of this seaside city by ferry."*

This scenario should evoke a sense of nearby spatial distance by highlighting the destination's proximity to the participant's home and the ease of reaching it. And the scenario that is used to manipulate dispositional distant spatial distance in the distant destination condition is:

> *"Imagine that you are planning a vacation trip to an **international** seaside city where you have to **take an airplane for 15 hours**. There is a newly discovered beach called ECHUCA which is located within 30 minutes from the port of this seaside city by ferry."*

This scenario should evoke a sense of distant spatial distance by emphasising the destination's distance from the participant's home and the extended journey required to reach it.

- ***Pretest***

Since this thesis adopts the framework of congruence in construal level to explain advertising effectiveness, this study starts with a pretest to confirm the manipulation

of dispositional spatial distance can influence the perceived spatial distance and construal level.

- **Participants and procedures**

Participants in the Pretest were recruited from Prolific, and the recruitment procedures align with the overall methodology. A total of one hundred and nine (119) participants participated in Pretest (80% in the 18-34 age group; female = 43%) and are randomly assigned to either of the two experimental conditions: nearby destination condition (N = 60) or distant destination condition (N = 59).

All the participants read the scenario. After reading the scenario, participants in both conditions were asked to report their construal level by answering an ostensibly irrelevant single-item construal level scale: "imagine that you had decided to purchase a photo frame, please indicate when you would buy the frame on a 13-point scale (1: today, 13: in 6 months)" (Hong & Lee, 2010). Furthermore, participants reported their perceived spatial distance to the ECHUCA beach by answering "Geographically, how far away do you feel this beach is from you?" on a 10-point Likert-type scale (1= very near, 10= very far). As for control variables, participants also reported the involvement with the beach ($\alpha = 0.935$) and familiarity with ECHUCA, measurements are the same as those of Study 2. Last, participants answered demographics questions.

- **Results of Pretest**

ANOVA results showed that participants perceived significant difference in the perceived spatial distance to ECHUCA ($F(1,117) = 16.699$, $p < 0.001$), indicating a successful manipulation of dispositional spatial distance. Participants in the nearby destination condition showed a lower level of perceived spatial distance to ECHUCA ($M_{near} = 5.35$, $SD_{near} = 2.28$) than those in the distant destination condition ($M_{distant} = 7.32$, $SD_{distant} = 2.95$). As expected, no significant difference was found in the involvement between both conditions ($M_{near} = 5.00$, $SD_{near} = 1.13$, $M_{distant} = 5.34$ $SD_{distant} = 1.09$, $F(1, 117) = 2.726$, $p = 0.101$) and all the participants reported no familiarity with ECHUCA.

In addition, ANOVA showed a significant difference in construal level between two groups ($F(1, 117) = 4.715$, $p = 0.032$); participants in the near destination condition demonstrated a lower level of construal ($M_{near} = 6.37$, $SD_{near} = 3.06$) than participants in the distant destination condition ($M_{distant} = 7.76$, $SD_{distant} = 3.91$). Thus, the manipulate dispositional spatial distance successfully elicited construal level.

- ***Measurement***

Spatial distance is location-based. For instance, it specifies where an event would happen in a close location (e.g., 10 miles away) or a distant location (e.g., 3000 miles away) (Fujita et al., 2006). According to construal level theory, construal level is determined by perceived spatial distance. In other words, when participants perceived that an event is located at a nearby vs. distant spatial distance, their construal level should change accordingly (Bar-Anan et al., 2006; Fujita et al., 2006; Fujita & Sasota, 2011; Trope & Liberman, 2010; Trope et al., 2007; Vallacher & Wegner, 1989). Hence, perceived spatial distance is often used as a single-dimension measure of construal level. In line with Fujita et al. (2006), Kim et al. (2016), and Wang and Lehto (2019)), participants answer:

"Geographically, how far away do you feel this beach is from you?" on a 10-point Likert-type scale (1= very near, 10= very far).

8.3.2 Dependent variables

8.3.2.1 Attitude towards the destination

Attitude is often considered a stable and enduring predisposition to behave, and it is possible that a favourable attitude will result in multiple positively-valenced responses towards the advertised product, including the intention to purchase/visit (Fishbein & Ajzen, 1977; Lavidge & Steiner, 1961; Mitchell & Olson, 1981). Attitude towards a destination is often featured in destination advertising. For instance, attitude towards the hotels that appear in the advertisements (Kim et al., 2016), attitude

towards tourism products (e.g., package tour) (Jia et al., 2021), attitude towards a destination such as water sports destination (Wang & Lehto, 2019) or a country (e.g., Russia) (Kim & Stepchenkova, 2015). Given the significance of attitude in marketing/advertising literature and its adaptability in the context of destination advertising, consistent with the literature review, this thesis choose attitude towards the advertised destination as one of the proxies of advertising effectiveness.

- ***Measurement***

Attitudes are normally measured on a semantic differential scale, which is used to measure the meaning of things and concepts (Snider & Osgood, 1969). On this scale, participants indicate where they feel a destination lies on a 7-point scales between paired adjectives with opposite meanings. Overall, attitude is normally comprised with three pairs of adjectives, including: bad vs. good, favourable vs. non favourable, negative vs. positive (Aaker & Keller, 1990; Ahluwalia & Gürhan-Canli, 2000; Simonin & Ruth, 1998). Consistent with attitude measurement, attitude towards destination in previous studies is also captured by these three pairs of objectives (e.g., Kim et al. (2016); Kim and Stepchenkova (2015); Wang and Lehto (2019)). Therefore, attitude towards a destination is measured by asking participants to report:

"This XXX (name of the destination) is a bad versus a good one";

"I do not like versus like this XXX"; and

"My opinion on this XXX is negative versus positive"

on a 7-point semantic differential scale.

8.3.2.2 Intention to visit

In line with the focus of this thesis, an effective destination advertisement should arouse a desire to purchase or visit (Echtner & Ritchie, 1993; Kaplanidou & Vogt, 2006) and should ultimately lead consumers to visitation (Alhemoud & Armstrong, 1996; Woodside & Lysonski, 1989). However, in laboratory settings, actual visitation

is difficult to measure. Instead, it can be captured by the measurement of behavioural intentions (Ajzen, 1991; Lavidge & Steiner, 1961).

According to Eagly and Chaiken (1993), behavioural intention represents the person's motivation in the sense of their conscious plan to exert effort to carry out a behaviour. And it is believed to lead to the specific behaviours with respect to the object (Fishbein & Ajzen, 1977). Likewise, behavioural intentions, such as intention to visit, purchase, or reserve, are considered measurable proxies of advertising effectiveness in the laboratory settings (e.g., Filieri et al. (2021); Kaplanidou and Vogt (2006); Kim and Stepchenkova (2015); Lam and Hsu (2006); Marder et al. (2019)).

- ***Measurement***

Intention to visit a destination is captured by using a modified version of the single-item measurement of behavioural intention. The single-item behavioural intention measurement has been the most popular among advertising agencies and marketing consulting firms (Jamieson & Bass, 1989), as it reduces demand for respondents (Kim & Stepchenkova, 2015). Hence, intention to visit a destination is measured by asking participants to answer:

"How likely is that you will visit this beach if you plan to travel?" on a 10-point scale anchored at 1 = highly unlikely to 10 = highly likely.

8.3.3 Control variables

8.3.3.1 Involvement

Involvement with the product (i.e. destination) enhances consumers' preference for the product (Petty & Cacioppo, 1981; Rossiter et al., 1970). Also, involvement represents cognitive and affective components, which are believed to form attitudes towards the advertised products (Ajzen, 1991; Zaichkowsky, 1994). Thus, involvement will be statistically controlled.

Involvement is measured using the **Personal Involvement Inventory** developed by Zaichkowsky (1994). The Personal Involvement Inventory is a context-free instrument that can be applied to measure involvement with products, with ads, or with purchase situations (Zaichkowsky, 1994). The Personal Involvement Inventory is shown in Appendix C.

8.3.3.2 Familiarity

Participants' knowledge and familiarity with the landscape sceneries might create bias against certain sceneries and affect their attitude and purchase intention towards the advertised product (Aggarwal & Zhao, 2015). For this study, participants evaluate their familiarity with the landscape sceneries presented in landscape photos.

Familiarity is measured on three 10-point three-item scales, participants to indicate **"How familiar are you with XXX?", "How much do you know about XXX?" and "How often do you think about XXX?" from 1 (Never) to 10 (Always)** (Aggarwal & Zhao, 2015).

8.3.3.3 Demographics

This thesis will statistically control gender, age, and marital status even though previous studies showed no effect of demographics on construal level.

Hence, participants to report:

Gender: Male, Female, and Not specified

Age: age range above 18

Marital status: Married, Widowed, Divorced, Separated, Single, and Prefer not to say.

8.3.4 Summary of measurement instruments

Table 24 provides a summary of measurement instruments.

Table 24: Overview of variables, measurement items, and sources of measurement instrument (Study 4(a) and Study 4(b))

	Variables	Instruments	Source
Independent variable (Manipulated)	Perceived vertical position (Manipulation check)	"When watching this photo, how high does this picture make you feel?" from 1 (very low) to 10 (very high).	Aggarwal and Zhao (2015), Slepian et al. (2015), and Jami (2019))
	Perceived spatial distance (Manipulation check)	Geographically, how far away do you feel this beach is from you? on a 10-point Likert-type scale (1= very near, 10= very far)	Fujita et al. (2006), Kim et al. (2016), and Wang and Lehto (2019))
Dependent variables (Measured)	Attitude towards the attraction	"This beach is a bad versus a good one"; "I do not like versus like this beach"; and "My opinion on this beach is negative versus positive".	Kim et al. (2016), Kim and Stepchenkova (2015), and Wang and Lehto (2019)
	Intention to visit	How likely is that you will visit this beach if you plan to travel? on a 10-point scale anchored at 1 = highly unlikely to 10 = highly likely.	Jamieson and Bass (1989) and Kim and Stepchenkova (2015).
Control variables (Measured)	Involvement	Personal Involvement Inventory (See Appendix C)	Zaichkowsky (1994)
	Familiarity	"How familiar are you with XXX?", "How much do you know about XXX?" and "How often do you think about XXX?" from 1 (Never) to 10 (Always)	Aggarwal and Zhao (2015)
	Demographics	Gender: Male, Female, and Not specified Age: age range above 18 Marital status: Married, Widowed, Divorced, Separated, Single, and Prefer not to say.	

8.4 Study design

8.4.1 Two-way between-subject experimental design

Study 4(a) employs a two-way between-subject experimental design to examine the congruence effect between vertical position and spatial distance on advertising effectiveness. This study has two independent variables (IVs): perceived vertical position and perceived spatial distance. And each IV has two levels: perceived vertical position has high and low levels, while perceived spatial distance has nearby and distant levels. A two-way between-subject experimental design that involves two IVs could inform the independent and simultaneous effects (i.e. interactive effects) of these IVs on dependent variable(s) (Vogt, 2011). Therefore, this study uses a two-way between-subject design to investigate whether the change in the levels of the perceived vertical positions and the levels of perceived spatial distance would have a simultaneous effect on advertising effectiveness.

The experiment consists of four conditions in accordance with the levels of the independent variables. Specifically, this study employs a 2 (spatial distance to destination: nearby destination vs. distant destination) x 2 (perceived vertical position: low position vs. high position) between-subject design. Experimental conditions depend on the levels of the IVs. Levels of IV represent groups/conditions within a treatment (i.e. IV), participants who are assigned to different conditions are exposed to the stimulus that is designed to manipulate the corresponding level of IV (Guarino et al., 2008).

8.4.2 Participants

One hundred and sixteen (160) participants were recruited from the Prolific.

8.4.3 Procedures

In line with the experimental design, the procedures are summarised in Figure 26.

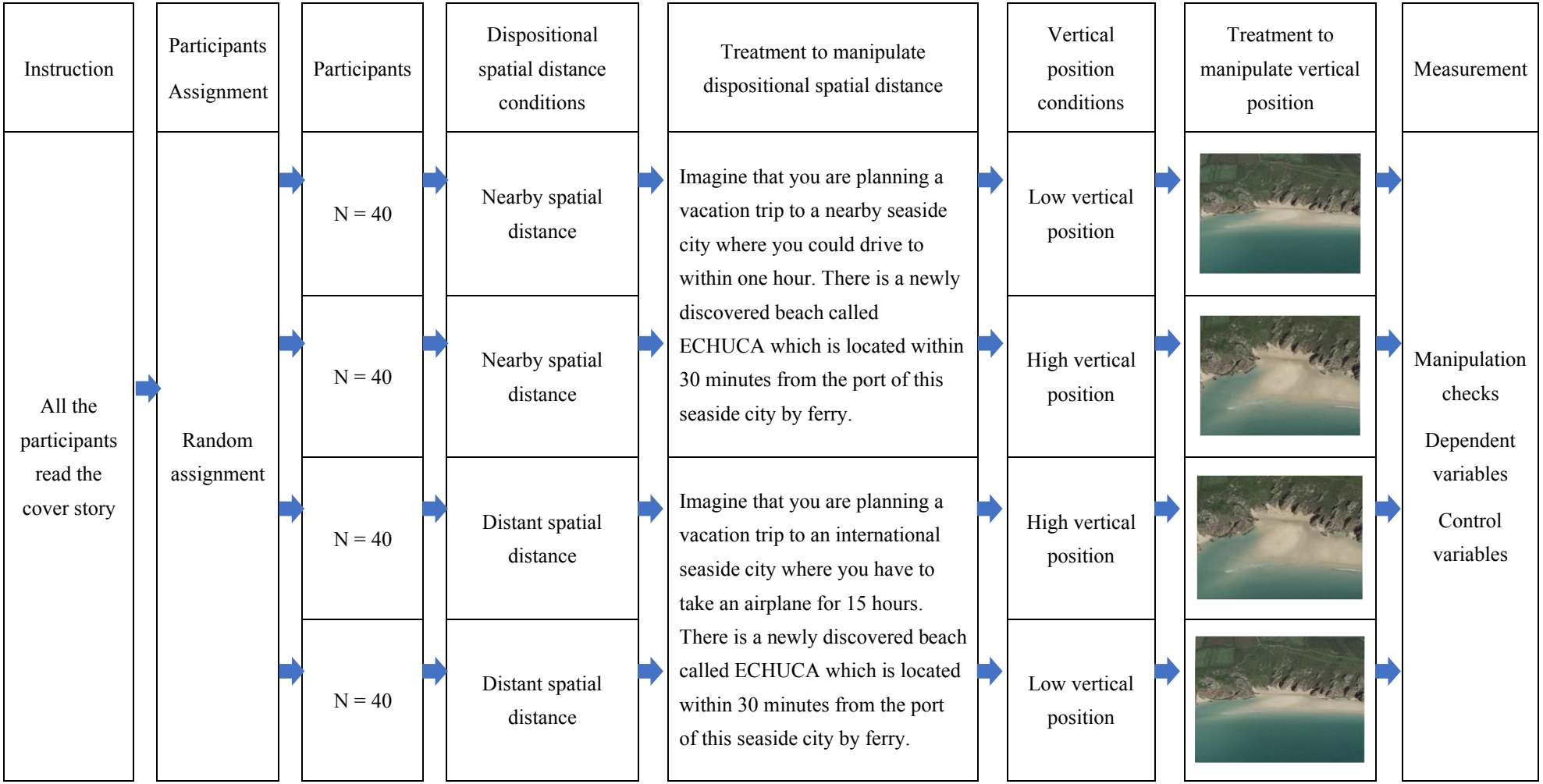


Figure 26: Overview of experimental procedures (Study 4(a))

Participants were randomly assigned to one of the four experimental conditions:

- condition 1 (nearby destination + low vertical position),
- condition 2 (nearby destination + high vertical position),
- condition 3 (distant destination + high vertical position), and
- condition 4 (distant destination + low vertical position).

All the participants first received scenarios designed to induce their dispositional spatial distance. Specifically, participants in the nearby destination conditions (condition 1 and condition 2) read: *"Imagine that you are planning a vacation trip to a **nearby** seaside city where you could **drive to within one hour**. There is a newly discovered beach called ECHUCA which is located within 30 minutes from the port of this seaside city by ferry."* Participants in the distant destination conditions (condition 3 and condition 4) read: *"Imagine that you are planning a vacation trip to an **international** seaside city where you have to **take an airplane for 15 hours**. There is a newly discovered beach called ECHUCA which is located within 30 minutes from the port of this seaside city by ferry."*

After dispositional spatial distance manipulation, advertisements were assigned to all the participants. All the participants were instructed to read "You come across an advertising photo promoting ECHUCA", then participants in the low perceived vertical position conditions (condition 1 and condition 4) were presented with the landscape photo of a beach (Figure 21(a)). In the high perceived vertical position conditions (condition 2 and condition 3), participants were shown a different landscape photo of a beach (Figure 21(b)).

Upon viewing the landscape photos of the beach, participants were asked to report their attitude toward the ECHUCA beach on a three-item 7-point semantic differential scale (Roose et al., 2019; Wang & Lehto, 2019). Items are "this beach is a bad versus a good one"; "I do not like versus like this beach"; and "My opinion on this beach is negative versus positive." Next, using the intention to visit scale, participants were asked: "How likely is that you will visit this beach if you plan to

travel?" on a 10-point scale anchored at 1 = highly unlikely to 10 = highly likely. Furthermore, as for manipulation checks, similar scales to Study 2 were used to measure perceived vertical position and spatial distance to the ECHUCA beach. As for the control variables, participants also reported familiarity with the ECHUCA, level of involvement. Finally, participants answered demographics questions.

8.4.4 Data collection

A questionnaire was administered via Qualtrics (Appendix F).

8.4.5 Data analysis

Study 4(a) is a two-way between-subject design aiming at testing the congruence effect of two independent variables on two continuous dependent variables.

First, Study 4(a) needs to identify whether the vertical positions and spatial distances have significant interactive effect on dependent variables. This step is to confirm that there exists a combinatorial effect between two independent variables on the changes of dependent variables. And any observed effect cannot or cannot solely be attributed to the effect of individual independent variable.

To achieve this, a two-way ANOVA or ANCOVA (if control variables need to be included) will be conducted to examine the interactive effect between perceived vertical position and perceived spatial distance on the dependent variables.

Second, on the basis of interactive effect between independent variables, the data analysis further examines if the congruence in construal level induces congruence effect. This is achieved by following the approach proposed by Roose et al. (2019), which suggests looking into the direction of the interactive effects. Specifically, this study will need to aggregate date within the same congruence/incongruence condition. Then, use ANOVA/ANCOVA to determine whether the values of outcome variables in congruence conditions are significantly higher than the levels of outcomes in incongruence conditions. It would suggest that the congruence effect exists,

supporting the hypothesis that congruence in construal level between perceived vertical position and perceived spatial distance positively influences advertising effectiveness.

8.5 Results

8.5.1 Participants

One hundred and sixty (160) participants were recruited and one hundred and forty-six (146) participants were retained in the sample (76% in the 18-34 age group, female = 38 %), 14 participants were removed due to failing the attention check. As shown in Table 25, participants distribution in four experimental conditions is as follows:

- condition 1 (nearby destination + low position) ($N = 39$, $N_{female} = 18$),
- condition 2 (nearby destination + high position) ($N = 36$, $N_{female} = 12$),
- condition 3 (distant destination + high position) ($N = 34$, $N_{female} = 13$), and
- condition 4 (distant destination + low position) ($N = 37$, $N_{female} = 12$).

In each experimental condition, participants were almost equally distributed in terms of gender, age, and marital status. This balanced distribution of participants across conditions allows for a more accurate analysis of the effects of the independent variables on the dependent variables, minimizing potential confounding factors.

Table 25: Sample profile (Study 4(a))

		Total	Condition 1	Condition 2	Condition 3	Condition 4
Sample Size:		**N = 146**	**N = 39**	**N = 36**	**N = 34**	**N = 37**
Variables:						
Age:						
	Under 18	0	0	0	0	0
	18-24	82	17	21	21	23
	25-34	32	10	10	6	6
	35-44	19	8	4	3	4
	45-54	12	4	1	4	3
	55-64	1	0	0	0	1
	65-74	0	0	0	0	0
	75-84	0	0	0	0	0
	85 or older	0	0	0	0	0
	Prefer not to say	0	0	0	0	0
Gender						
	Male	89	20	24	21	24
	Female	56	18	12	13	13
	Prefer not to say	1	1	0	0	0
Marital Status						
	Married	25	11	5	5	4
	Widowed	1	0	0	0	1
	Divorced	3	0	1	1	1
	Separated	2	0	0	1	1
	Never married	110	27	28	26	29
	Prefer not to say	5	1	2	1	1

8.5.2 Measurement scales

Table 26 shows that multi-item measurement scales all meet the satisfactory reliability threshold, as Cronbach's α > 0.7 (Cronbach, 1951).

Table 26: Reliability check of measurement scales (Study 4(a))

Measurement	Cronbach's α	Mean	SD
Involvement: 10 items	0.949	5.126	1.157
Familiarity: 3 items		1	0
Attitude towards the destination	0.954	5.169	1.341

8.5.3 Descriptive statistics

8.5.3.1 Manipulation checks

- ***Perceived spatial distance***

Manipulation checks confirmed the success of the experimental manipulation of perceived spatial distance to ECHUCA. A significant difference in the perceived spatial distance to ECHUCA (F(1, 144) = 6.101, p = 0.015) was observed. ANOVA revealed that participants in the nearby destination conditions showed a lower level of perceived spatial distance to ECHUCA (M_{near} = 5.97, SD_{near} = 2.46) than participants in the distant destination conditions ($M_{distant}$ = 7.06, $SD_{distant}$ = 2.83).

- ***Perceived vertical position***

Manipulation checks also confirmed the success of the experimental manipulation of perceived vertical position. Results showed a significant difference in the perceived vertical position manipulation (F(1, 144) = 4.879, p = 0.029); participants in the low vertical position conditions reported a lower level of perceived vertical position (M_{low} = 6.42, SD_{low} = 2.11) than those in the high vertical position conditions (M_{high} = 7.13, SD_{high} = 1.72).

8.5.3.2 Control variables

- ***Involvement with Beach***

As expected, the ANOVA results showed no significant differences in involvement ($F(3,142) = 1.09$, $p = 0.355$) across four conditions.

- ***Familiarity with Beach called ECHUCA***

All the participants reported that they were not familiar with the beach called ECHUCA.

- ***Demographics***

As shown in Table 25**,** demographic distributions are relatively balanced between groups. Hence, demographics will not be treated as covariates.

These results support the validity of the experimental design and suggest that the results obtained are not influenced by factors such as involvement, familiarity, or demographic differences between the experimental groups.

8.5.4 Hypothesis testing

ANOVA results initially showed significant interactive effects between vertical positions with spatial distance on attitude towards the destination (i.e. ECHUCA) ($F(3, 142) = 4.909$, $p = 0.028$) and intention to visit the destination ($F(3, 142) = 4.909$, $p = 0.018$). Further analysis also revealed how the interactive effects inform a congruence effect that enhance advertising effectiveness.

Following Roose et al. (2019), determining whether vertical positions and spatial distance induce congruence effect requires comparing congruent and incongruent conditions. In this experiment, condition 1 (nearby destination + low position) and condition 3 (distant destination + high position) feature congruence in construal level,

while condition 2 (nearby destination + high position) and condition 4 (distant destination + low position) feature incongruence in construal level.

Hence, the analysis compares the two congruence conditions (condition 1 and condition 3) against the two incongruence conditions (condition 2 and condition 4) by aggregating data of each set of conditions. By doing so, the analysis ensures that the effect is due to congruence in construal level. As a result, ANOVA results revealed a significant effect of congruence on attitude towards the destination ($F(1, 144) = 5.168$, $p = 0.024$). Consistent with the predictions, participants in the congruence conditions evaluate the beach more positively than participants in the incongruence conditions with $M_{congruence} = 5.41$ ($SD_{congruence} = 1.17$); $M_{incongruence} = 4.92$ ($SD_{incongruence} = 1.46$) (Figure 27). As for individual conditions, attitudes towards the destination are $M_{condition\ 1} = 5.67$ ($SD = 1.12$), $M_{condition\ 2} = 4.94$ ($SD = 1.42$), $M_{condition\ 3} = 5.14$ ($SD = 1.20$), and $M_{condition\ 4} = 4.90$ ($SD = 1.50$) (Figure 28).

Thus, H3a is supported.

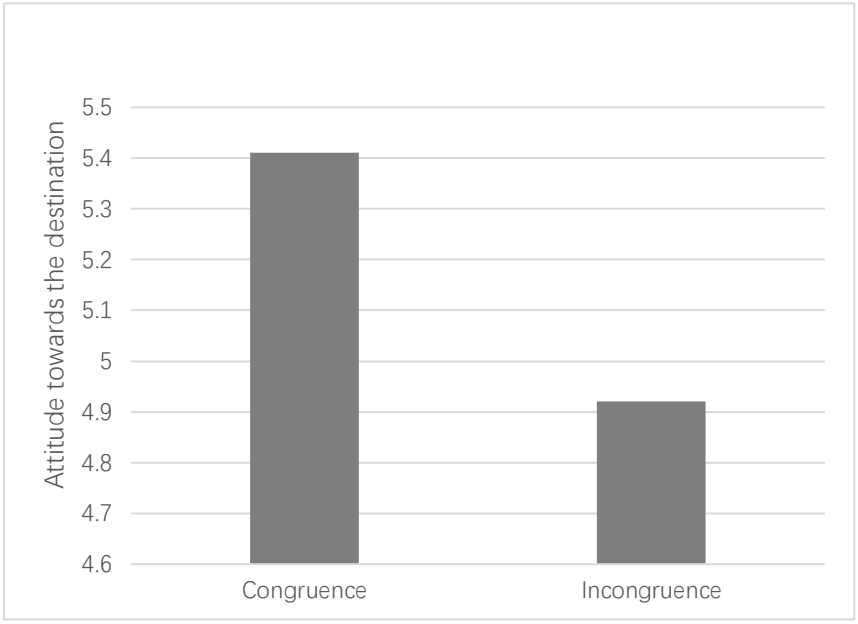


Figure 27: Attitude towards the destination between congruence and incongruence groups (Study 4(a))

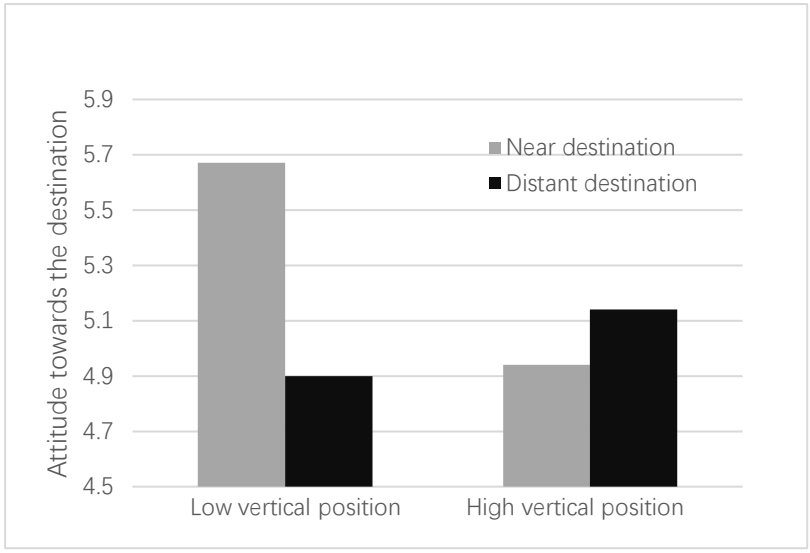


Figure 28: Attitude towards the destination in individual conditions (Study 4(a))

Furthermore, the ANOVA results indicated a significant main effect of congruence on intention to visit the destination ($F(1, 144) = 4.666$, $p = 0.032$). Specifically, congruence conditions lead to higher intention to visit than incongruence conditions ($M_{congruence} = 6.01$, $SD_{congruence} = 2.56$; $M_{incongruence} = 5.08$, $SD_{incongruence} = 2.66$) (Figure 29). As for individual conditions, intention to visit the destination are $M_{condition\ 1} = 6.59$ ($SD = 2.43$), $M_{condition\ 2} = 5.47$ ($SD = 2.70$), $M_{condition\ 3} = 5.50$ ($SD = 2.50$), and $M_{condition\ 4} = 4.59$ ($SD = 2.61$) (Figure 30).

Thus, H3b is supported.

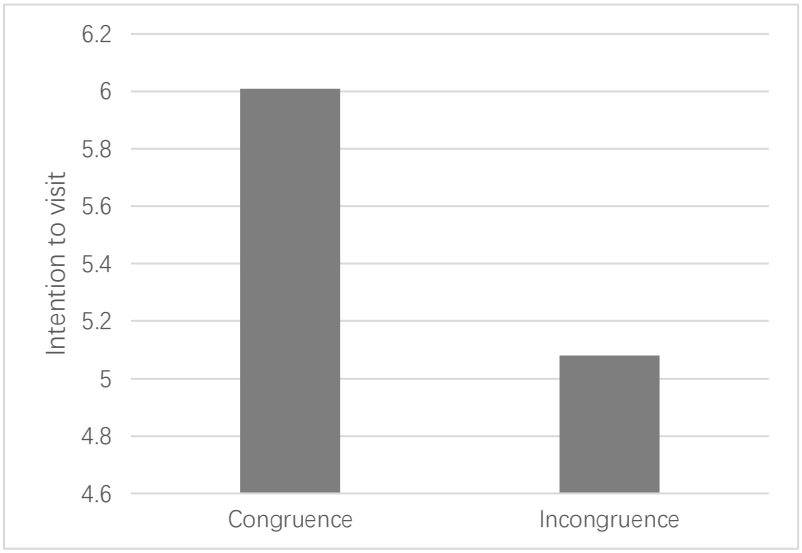


Figure 29: Intention to visit the destination between congruence and incongruence groups (Study 4(a))

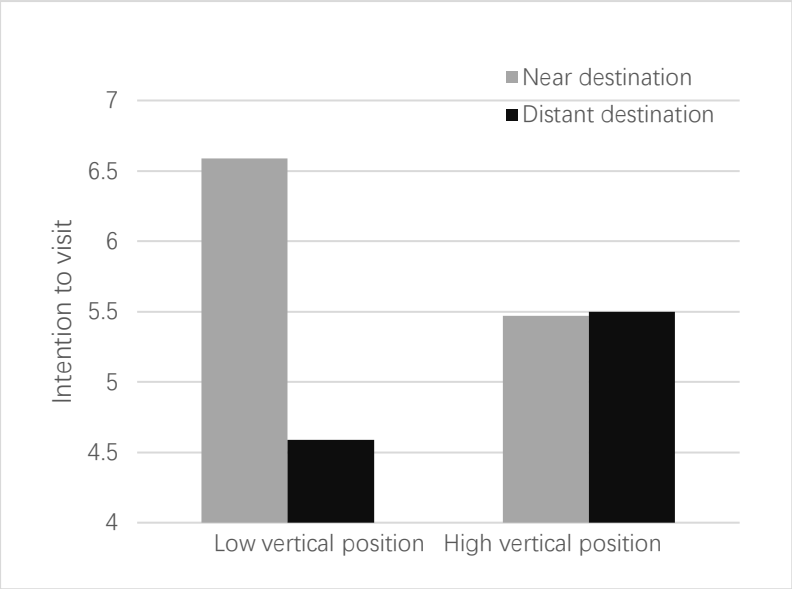


Figure 30: Intention to visit the destination in individual conditions (Study 4(a))

8.6 Discussion

The results of Study 4(a) address the knowledge gap in empirical understandings of how vertical positions in landscape photos could influence destination attitude and intention to visit.

The results of Study 4(a) manifest the advertising scenario when both the advertising element and consumer factor (i.e. dispositional spatial distance) together influence destination attitude and intention to visit. To elaborate, results of Study 4(a) revealed that when consumers have a travel plan to a distant location, they exhibit higher attitude towards and intention to visit the destination at that location if the destination photo is taken from a high vertical position. Conversely, when they plan to travel to a nearby location, they exhibit higher attitude towards and intention to visit the destination at that location if the destination photo is taken from a low vertical position. However, consumers show less positive attitude and intention to visit the destination when they plan to visit a nearby (vs. distant) location and the destination photo is taken from a high (vs. low) vertical position.

8.7 Chapter conclusion

This chapter has presented detailed design and methodological choices of an experimental study aimed at testing the effect of congruence of construal level between perceived vertical position and dispositional spatial distance on attitude towards and intention to visit an advertised destination. The study design also included a pretest to examine the manipulation of dispositional spatial distance.

A two-way between-subject experiment revealed that when the construal level of perceived vertical position and depositional spatial distance is congruent (i.e. both high level or both low level), consumers display more favourable attitude towards and intention to visit the advertised destination, supporting H3a and H3b and addressing RQ5.

This chapter has examined the destination attitude and intention to visit in the scenarios where the construal level between an advertising element (i.e. landscape photos) and a consumer factor (i.e. dispositional factor) is matched. Specifically, when consumers have a travel plan to a distant (vs. nearby) location, they exhibit higher attitude towards and intention to visit the destination at that location when the destination photo is taken from a high (vs. low) vertical position.

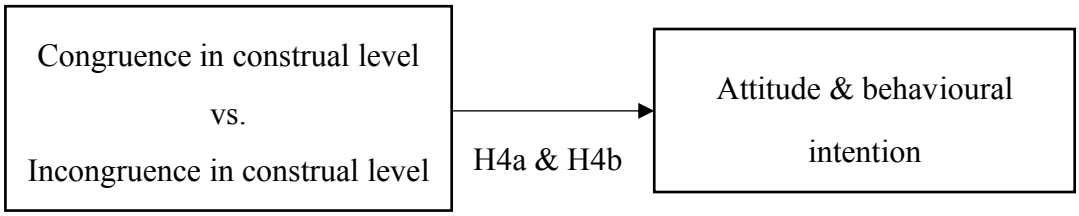
The next step in this investigation of advertising effectiveness addresses the congruence between vertical position and situational spatial distance, which is the congruence between multiple advertising elements, featuring message-message congruence. This transition towards a more comprehensive examination will provide a holistic understanding of the intricate interplay between different advertising factors and their combined impact on consumer attitudes and intentions. By analysing the congruence between these elements, this thesis aims to shed light on how destination attitude and intention to visit can be optimised through a strategic alignment of visual and textual cues.

Chapter 9: Study 4 (b) – Matching Vertical Position and Situational Spatial Distance on Destination Attitude and Intention to Visit

Chapter Content

9.1 Chapter introduction

This chapter investigates the interplay between landscape photos and another advertising element (i.e. spatial distance cues) on destination attitude and intention to visit, featuring a message-message congruence scenario. This chapter presents the design and findings of Study 4(b). In this chapter, the detailed design of a two-way between-subject experiment will be presented, followed by the findings of the experiment. This study aims at answering RQ5: Do vertical position with another construal-representing factor have a congruence effect on attitude and intention to visit? by testing H4a: Advertisements combining landscape photos and another advertising element that evoke the same (vs. different) levels of construal increase consumers' overall attitude towards the advertised product, and H4b: Advertisements combining landscape photos and another advertising element that evoke the same (vs. different) levels of construal consumers' increase behavioural intention towards the advertised product.



This chapter begins with detailed study designs of Study 4(b). Specifically, Section 9.3 provides explanations and justifications regarding variables, instrumentations, and materials. This section also includes a detailed **Pretest** to revalidate the experimental stimuli used to manipulate perceived vertical position. This pretest differs from the manipulation proposed in Study 2 in terms of the choice of landscape sceneries (i.e. a manor house), aiming to strengthen the robustness of the proposed manipulation technique. Section 9.4 presents detailed study design information, including experiment design, participants, experiment procedures, data collection and data analysis.

Next, Section 9.5 presents the result of Study 4(b), including participants' demographic breakdown, measurement scales, descriptive statistics. ANCOVA results show that perceived vertical position and situational spatial distance have an interactive effect on attitude and intention. Specifically, when perceived vertical position and situational spatial distance cue are congruent in an advertisement (i.e. both high/low on level of construal), consumers exhibit more favourable attitudes and higher intention to visit the destination, supporting H4a and H4b.

Section 9.6 draws inferences from the findings and presents a discussion regarding how advertisers and marketers can use landscape photos to promote a destination located at nearby vs. distant location.

Finally, Section 9.7 concludes this chapter.

9.2 Purpose

The purpose of Study 4(b) is to proceed with advertising effectiveness in the message-message congruence scenario, which features mass communication approach. This study focuses on the interplay between landscape photos and another advertising element: situational spatial distance cues. The design of this study is to understand which landscape photos of an attraction (taken with low vs. high vertical position) should be used in combination with which ad slogan framing when the slogan discloses the location information of the attraction (either distant or a nearby location) in order to enhance consumers attitude towards and intention to visit this advertised destination. This study aims to answer RQ5: Do vertical position with another construal-representing factor have a congruence effect on destination attitude and intention to visit? To address this question, this study tests H4a and H4b.

9.3 Variables, instrumentation, and materials

9.3.1 Independent variables

9.3.1.1 Perceived vertical position

- ***Manipulation of vertical position***

Using varied visual stimuli to manipulate the same IV is a common practice in visual communication studies. For instance, the manipulation of verticality has been previously used with product photos such as bicycle (e.g., Peracchio and Meyers-Levy (1992)), mug (e.g., Aggarwal and Zhao (2015)), or cereals (e.g., Yang et al. (2010)). Similarly, the visual angle effect in landscape photos was examined with landscape sceneries of a lake and a glacier (Roose et al., 2019). Visual entropy was examined using eggs, ice cream, strings, dollars, nail polisher, etc. (Biliciler et al., 2021).

Such an approach enhances methodological robustness and extends managerial implications. In terms of methodology, for instance, verticality can be manipulated through varied visual materials, such as product photos (e.g., mug, cereal, bicycle), and landscape photos (e.g., canyon) (Aggarwal & Zhao, 2015; Slepian et al., 2015). This enhances methodological robustness by demonstrating that the proposed manipulation technique can be used regardless of varied visual materials, and the effect of IV does not seem to be influenced by the types of materials. In terms of managerial implications, using varied product categories extends the applicability of visual stimuli across varied advertising contexts and product categories because any tested visual materials are ready-to-use for marketers (e.g., Yang et al. (2010); Biliciler et al. (2021)).

Therefore, this thesis adopts a new landscape scenery to manipulate vertical position and test its effect on destination attitude and intention to visit, with the purpose of extending methodological robustness and managerial implications. As defined, landscape photos are not limited to natural landscapes; they also include built

objects such as cityscapes and buildings that blend in with the natural landscapes (Hartmann & Apaolaza-Ibáñez, 2012; Jami, 2019; Roose et al., 2019). Additionally, as Figure 1 has shown, it is common to see landscape photos that feature built objects in advertisements (e.g., Boooking.com, FIJI, Under Amour).

- ***Choice of the landscape scenery***

A manor house was chosen as the landscape scenery for several reasons. Firstly, manor houses are commonly seen as European heritage (Wikipedia, 2022), with around 3000 manor houses in the UK alone (Lazarus, 2018). At present, a great number of manor houses have been converted to serve varied tourism-related purposes such as hotels, restaurants, clubs, spas etc. (TripAdvisor, 2022). Secondly, a great deal of landscape photos of manor house appears in destination advertisements (e.g., TripAdvisor (2022)). Hence, it is reasonable to consider manor house as one of the examples of destination advertisements. Moreover, to the choice of manor house, their locations in Europe also serve the manipulation of situational spatial distance in the following sections.

- ***Stimuli production***

Another set of landscape photos of a manor house was taken by following the manipulation procedure of Study 2. Two photos were taken from either a relatively higher vertical position or a relatively lower vertical position, representing a high or low vertical position, respectively (Figure 31). As mentioned, to control the visual distance and visual angle, each set of photos was taken while maintaining the same visual distance to the centre of each scene and a downward angle. Photos of the manor house were taken from 68 meters (Figure 31(a)) and 233 meters (Figure 31(b)) above the sea level. The visual distance to the centre of the scene is 350m.

Figure 31: Visual manipulation of vertical positions (Study 4(b))

Visual manipulations of low vertical position

(a)

Visual manipulations of high vertical position

(b)

- ***Pretest***

  - **Participants and procedures**

Participants in the Pretest were recruited from Prolific, and the recruitment procedures align with the overall methodology. Eighty-four (84) participants participated in this Pretest (94% in the 18-34 age group; female = 43%)). Two photos echo two conditions: high vertical position condition and low vertical position condition (Figure 31). Participants were randomly assigned to either one of the two conditions: high vertical position condition (N = 41) or low vertical position condition (N = 43). In the low vertical position condition, participants were presented with Figure 31(a). And in the high perceived vertical position condition, participants were presented with Figure 31(b).

After viewing the photo, participants reported perceived vertical position by answering "When watching this photo, how high does this photo of the manor house make you feel?" on a 10-point Likert-type scale (1= very low, 10= very high) (Aggarwal & Zhao, 2015). Perceived visual distance to the scene by answering "When watching this photo, how far away do you feel this manor house is from you?" on a 10-point Likert-type scale (1= very near, 10= very far) (Aggarwal & Zhao, 2015).

And a self-reported measurement of visual angle by rating "To what extent do you imagine looking down versus looking up" on a seven-point bipolar scale (1: looking down to 7: looking up) (Roose et al., 2019).

- **Results of Pretest**

Consistent with proposed manipulation technique, ANOVA showed significant differences in perceived vertical positions in landscape photos of a manor house, indicating a successful manipulation (M_{high} = 8.20, SD_{high} = 1.63; M_{low} = 7.09, SD_{low} = 1.38, F(1, 82) = 11.235, p = 0.001). ANOVA also revealed no significant difference in visual distances between high and low vertical position conditions (M_{high} = 7.27, SD_{high} = 2.05; M_{low} = 7.16, SD_{low} = 1.83, F(1, 82) = 0.062, p = 0.804) and no significant difference in visual angles between high and low vertical position conditions (M_{high} = 2.78, SD_{high} = 2.05; M_{low} = 2.88, SD_{low} = 1.83, F(1, 82) = 0.059, p = 0.808).

- ***Measurement***

In line with Study 2, a straightforward single-item scale is used (e.g., Aggarwal and Zhao (2015); Slepian et al. (2015); Jami (2019)) as the manipulation check of perceived vertical position. Participants to indicate:

"When watching this photo, how high does this picture make you feel?"

from 1 (very low) to 10 (very high).

9.3.1.2 Perceived situational spatial distance

- ***Manipulation of situational spatial distance***

Study 4(b) differs from Study 4(a) in terms of the manipulation of spatial distance. Study 4(b) aims to investigate situational spatial distance that normally appears in mass communication, regardless of consumer factors (e.g., dispositional spatial distance). Situational spatial distance is how close vs. distant a destination is to

tourists at the time when they read about the advertisement of that destination (Jia et al., 2021). It is commonly seen in mass communication as advertisers "fully control all advertising features." (Roose et al., 2019) (p.412). For instance, consumers living in the United States should feel a beach in Seattle closer than a beach located in Vancouver, Canada (Jia et al., 2021).

The fundamental criterion of manipulating situational spatial distance is through message framing that disclose the geographical distance between the destination and consumers. For instance, the pioneering manipulation of spatial distance by Fujita et al. (2006) informed New York-based participants that an event is located "outside of New York City, about 3 miles away from here" (near spatial distance) or "outside of Los Angeles, about 3000 miles away from here" (distant spatial distance). In the context of destination advertising, studies typically inform consumers that a destination is domestic (i.e. nearby) or international (i.e. distant), as people tend to perceive a domestic location as spatially closer than an international location (Mishra & Mishra, 2010). For instance, Jia et al. (2021) showed US-based consumers that a package tour in Seattle, US to induce nearby spatial distance and Vancouver, Canada to induce distant spatial distance.

Following studies by Fujita et al. (2006) and Jia et al. (2021), this study sets the scenario in which the destination advertisement targets UK-based consumers. It then selects a domestic location (i.e. Brighton) to manipulate close situational spatial distance and an international location (i.e. the Czech Republic) to manipulate distant situational spatial distance. The reason for choosing UK-based consumers is solely for convenient purposes, as the manipulation of situational spatial distance does not discriminate consumers' locations. Brighton and the Czech Republic were chosen because several manor house sites are located in these two areas, allowing the experimenter to eliminate as many confounds as possible. Also, the geographical distance to the Czech Republic (1200 miles) is more than the largest domestic route from southern coast of England to the north of Scotland (622 miles).

As a result, two advertising slogans are framed to induce situational spatial distance for UK-based consumers. For nearby spatial distance manipulation, the advertising slogan reads:

"Explore Manor House in Brighton".

Whereas for the distant spatial distance manipulation, the advertising slogan reads:

"Explore Manor House in the Czech Republic."

- ***Measurement***

In line with Fujita et al. (2006), Kim et al. (2016), and Wang and Lehto (2019), perceived situational spatial distance is also measured by asking participants to answer:

"Geographically, how far away do you feel this Manor House is from you?" on a 10-point Likert-type scale (1= very near, 10= very far).

9.3.2 Dependent variables

Study 4(a) and Study4(b) share the same dependent variables, including intention to visit the destination and attitude towards the destination. The measurement scales of both studies are the same, also as shown in Table 24.

9.3.3 Control variables

Study 4(a) and Study4(b) share the same control variables, including involvement, familiarity, and demographics. The measurement scales are presented in Table 24.

9.4 Study design

9.4.1 Two-way between subject experimental design

Study 4(b) also uses two-way between-subject experimental design to examine the interactive effect between vertical positions and spatial distance on destination attitude and intention to visit, same with Study 4(a). This study also employs a 2 (spatial distance to destination: nearby destination vs. distant destination) x 2 (perceived vertical position: low position vs. high position) between-subject design. Hence, the experiment consists of four conditions:

- condition 1 (nearby destination + low vertical position),
- condition 2 (nearby destination + high vertical position),
- condition 3 (distant destination + high vertical position), and
- condition 4 (distant destination + low vertical position).

This study aims to investigate the interactive effects between vertical position and situational spatial distance. In other words, participants will be exposed to the advertisements that induce both vertical positions and spatial distances at the same time, regardless of consumer factors. Hence, the experimental stimuli, including the landscape photos and advertising slogans, are combined. Thus, four advertisements are designed to manipulate vertical positions and situational spatial distance (Figure 32).

By combining the landscape photos and advertising slogans, the study aims to measure the effects of these manipulations on advertising effectiveness while considering the interaction between vertical position and situational spatial distance.

Figure 32: Experimental materials to manipulate vertical positions and spatial distance (Study 4 (b))

		Spatial distance	
		Near destination	**Distant destination**
Perceived height	**Low vertical position**	 Explore Manor House in Brighton **(a)**	 Explore Manor House in The Czech Republic **(b)**
	High vertical position	 Explore Manor House in Brighton **(c)**	 Explore Manor House in The Czech Republic **(d)**

9.4.2 Participants

Two hundred (200) UK-based participants were recruited from the Prolific.

9.4.3 Procedures

The experimental procedures are summarised in Figure 33.

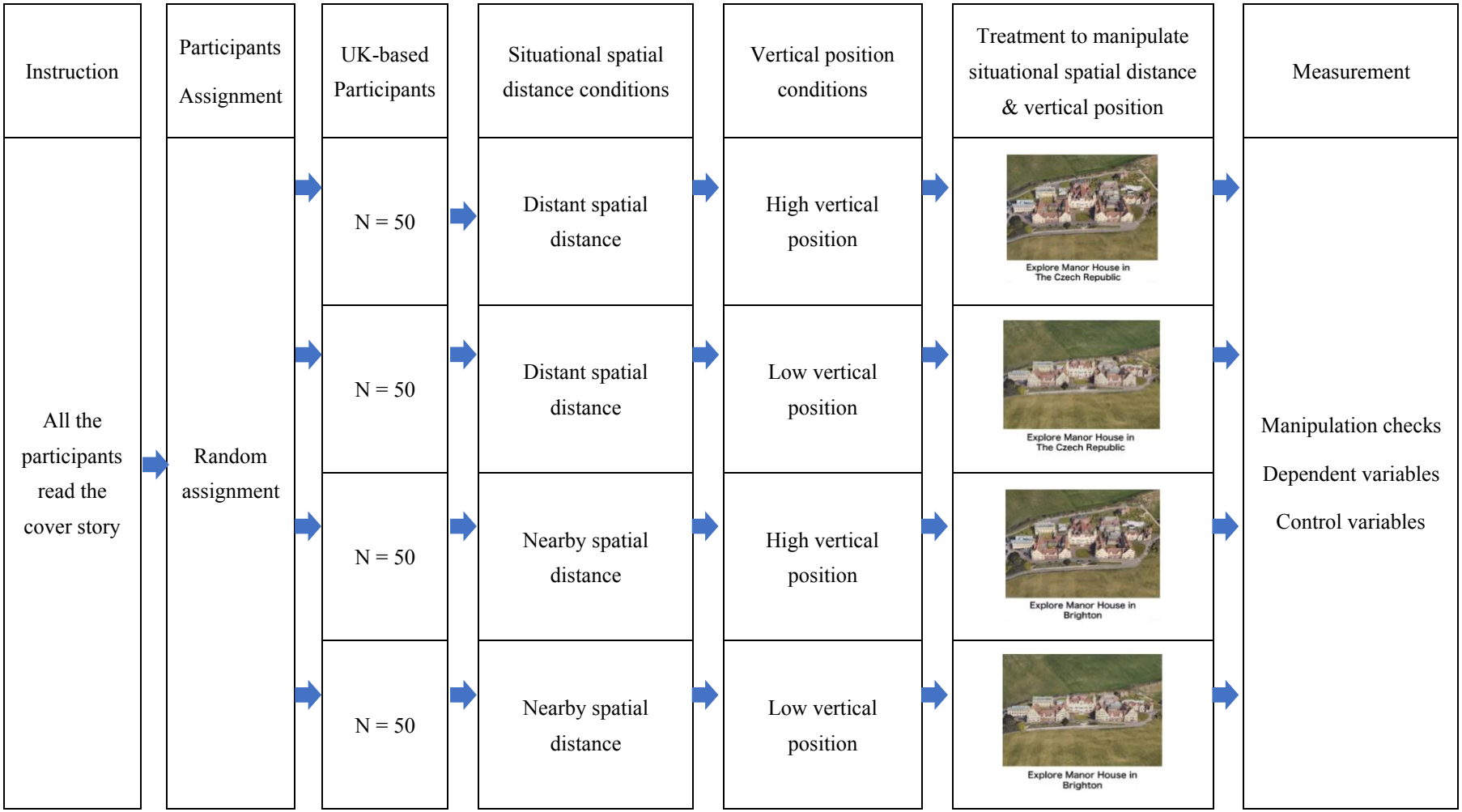


Figure 33: Overview of experimental procedures (Study 4(b))

The scenario experiment begins with informing participants to "Get inspiration for your next trip," adapted from the homepage of Booking.com (Booking, 2020).

After setting the scenario, 200 participants were randomly assigned to one of the four experimental conditions. Participants in each condition were presented with one of the four advertisements combining the landscape photo and a slogan that is designed to manipulate perceived vertical positions and spatial distance simultaneously. Specifically, participants in condition 1 (nearby destination + low vertical position) were presented with Figure 32(a), participants in condition 2 (nearby destination + high vertical position) were presented with Figure 32(c), participants in condition 3 (distant destination + high vertical position) were presented with Figure 32(d), and participants in condition 4 (distant destination + low vertical position) were presented with Figure 32(b).

Upon viewing the advertisement, participants reported their attitude towards and intention to visit the destination (i.e. Manor House) as the proxies for advertising effectiveness. Attitude towards the Manor House is measured using a three-item 7-point semantic differential scale (Roose et al., 2019; Wang & Lehto, 2019). Items include "this manor house is a bad versus a good one"; "I do not like versus like this manor house"; and "My opinion on this manor house is negative versus positive". Next, participants were asked: "How likely is that you will visit this manor house if you plan to travel"? on a 10-point scale anchored at 1 = highly unlikely to 10 = highly likely. Furthermore, as for manipulation checks, participants reported perceived vertical position and spatial distance to the manor house. As for the control variables, participants reported familiarity with the Manor House shown in the landscape photos, familiarity with Brighton, familiarity with the Czech Republic, and level of involvement. Lastly, participants answered demographics questions.

9.4.4 Data collection

A questionnaire was administered via Qualtrics (Appendix G).

9.4.5 Data analysis

The overall methodology provides a framework for data analysis. The data analysis procedures examining the congruence effect in Study 4(b) are consistent with those used in Study 4(a).

9.5 Results

9.5.1 Participants

One hundred and eighty-eight (188) participants were retained in the sample (67% in the 18-44 age group, female = 71 %), of 200 participants, 12 participants were removed after the attention check. As shown in Table 27, the distribution of participants in four experimental conditions is as follows:

- condition 1 (nearby destination + low position) ($N = 50$, $N_{female} = 18$),
- condition 2 (nearby destination + high position) ($N = 50$, $N_{female} = 12$),
- condition 3 (distant destination + high position) ($N = 44$, $N_{female} = 13$), and
- condition 4 (distant destination + low position) ($N = 44$, $N_{female} = 12$).

Participants in each experimental condition were almost equally distributed in terms of gender, age, and marital status.

Table 27: Sample profile (Study 4(b))

		Total	Condition 1	Condition 2	Condition 3	Condition 4
Sample Size:		**N = 188**	**N = 50**	**N = 50**	**N = 44**	**N = 44**
Variables:						
Age:						
	Under 18	0	0	0	0	0
	18-24	37	11	8	7	11
	25-34	50	15	12	12	11
	35-44	39	9	9	13	8
	45-54	34	6	9	10	9
	55-64	20	7	9	1	3
	65-74	7	1	3	1	2
	75-84	1	1	0	0	0
	85 or older	0	0	0	0	0
	Prefer not to say	0	0	0	0	0
Gender						
	Male	54	15	15	12	12
	Female	134	35	35	32	32
	Prefer not to say	1	1	0	0	0
Marital Status						
	Married	75	15	19	23	19
	Widowed	2	0	2	0	0
	Divorced	14	4	4	3	2
	Separated	4	2	1	1	0
	Never married	91	29	24	16	22
	Prefer not to say	1	0	0	1	0

9.5.2 Measurement scales

Table 28 shows that multi-item measurement scales all meet the satisfactory reliability threshold, as Cronbach's α > 0.7 (Cronbach, 1951).

Table 28: Reliability check of measurement scales (Study 4(b))

Measurement	Cronbach's α	Mean	SD
Involvement: 10 items	0.908	4.047	1.120
Familiarity with Manor House: 3 items	0.895	1.340	0.843
Familiarity with Brighton: 3 items	0.879	3.810	1.942
Familiarity with the Czech Republic	0.902	2.447	1.660
Attitude towards the destination	0.923	4.881	1.234

9.5.3 Descriptive statistics

9.5.3.1 Manipulation checks

- ***Perceived vertical position***

Manipulation checks confirmed the success of the experimental manipulation of perceived vertical position. ANOVA results showed a significant difference in the perceived vertical position ($F(1, 186) = 4.804$, $p = 0.03$); participants in the low position conditions reported a lower level of perceived vertical position ($M_{low} = 5.56$, $SD_{low} = 1.75$) than those in the high vertical position conditions ($M_{high} = 6.12$, $SD_{high} = 1.72$).

- ***Perceived spatial distance***

Manipulation checks confirmed the success of the experimental manipulation of perceived situational spatial distance to the manor house. ANOVA results revealed a significant difference in the perceived distance ($F(1, 186) = 26.520$, $p < 0.001$); participants showed a lower perceived distance to Brighton ($M_{near} = 6.35$, $SD_{near} = 2.33$) than to the Czech Republic ($M_{distant} = 7.91$, $SD_{distant} = 1.73$).

9.5.3.2 Control variables

- ***Involvement with Manor House***

ANOVA results showed no significant differences in involvement with Manor House ($F(3,184) = 1.897$, $p = 0.132$) across four conditions.

- ***Familiarity with Manor House***

ANOVA results showed no significant differences in familiarity with the Manor House ($F(3,184) = 1.147$, $p = 0.331$) across four conditions.

- ***Familiarity with the Czech Republic***

ANOVA results showed no significant differences in familiarity with the Czech Republic ($F(3, 184) = 1.713$, $p = 0.166$) across four conditions.

- ***Familiarity with Brighton***

However, ANOVA results showed a significant difference in familiarity with Brighton ($F(3, 184) = 2.655$, $p = 0.050$) across four conditions. Hence, familiarity with Brighton will be considered as a covariate.

- ***Demographics***

As shown in Table 27**,** demographic distributions are relatively balanced between groups. Hence, demographics will not be treated as covariates.

9.5.4 Hypothesis testing

ANCOVA results initially showed significant interactive effects between vertical positions with spatial distance on attitude towards the destination (i.e. Manor House) ($F(3, 184) = 8.093$, $p = 0.005$) and intention to visit the destination ($F(3, 184) = 8.724$,

p = 0.004). Further analysis also revealed how the interactive effects inform a congruence effect that enhances destination attitude and intention to visit.

Following Roose et al. (2019), the analysis compares the two congruence conditions (condition 1 and condition 3) against the two incongruence conditions (condition 2 and condition 4) by aggregating data of each set of conditions. By doing so, the analysis ensures that the effect is due to congruence in construal level. After aggregating the data, the involvement with Manor House became a covariate as it varies between congruence vs. incongruence conditions ($F(1, 186) = 5.096$, p = 0.025). As a result, ANCOVA is employed.

ANCOVA results revealed a significant effect of congruence on attitude towards the destination ($F(1, 185) = 8.921$, p = 0.003). Consistent with the expectations, participants in the congruence conditions evaluate the Manor House more positively than participants in the incongruence conditions with $M_{congruence}$ = 5.07 ($SD_{congruence}$ = 1.21); $M_{incongruence}$ = 4.69 ($SD_{incongruence}$ = 1.24) (Figure 34). As for individual conditions, attitudes towards the manor house are $M_{condition\ 1}$ = 5.04 (SD = 1.28), $M_{condition\ 2}$ = 4.66 (SD = 1.24), $M_{condition\ 3}$ = 5.11 (SD = 1.14), and $M_{condition\ 4}$ = 4.73 (SD = 1.24) (Figure 35).

Thus, H4a is supported.

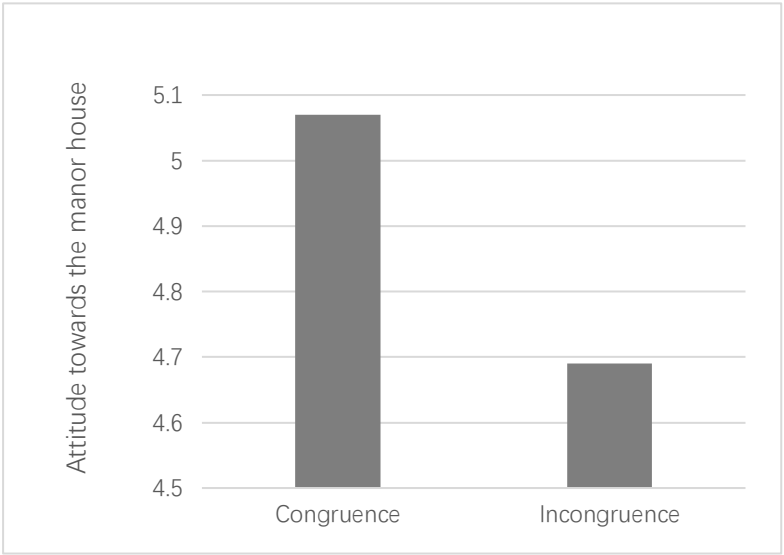


Figure 34: Attitude towards the destination between congruence and incongruence groups (Study 4(b))

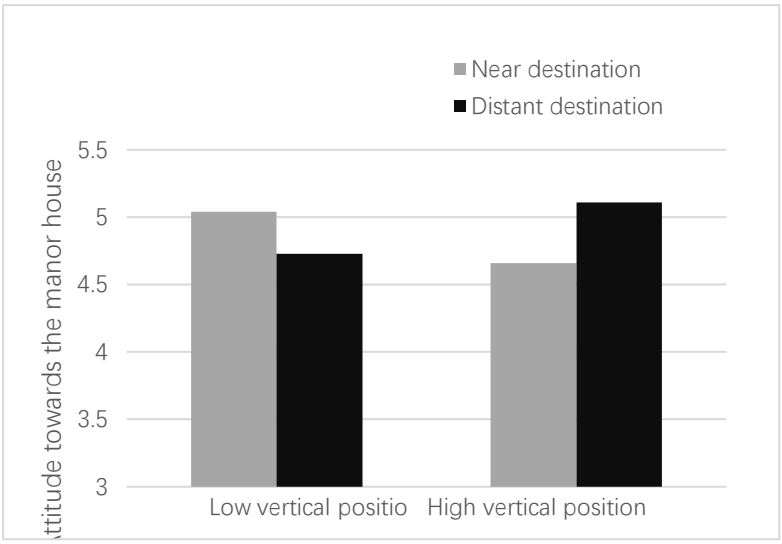


Figure 35: Attitude towards the destination in individual conditions (Study 4(b))

Furthermore, the ANCOVA results also suggested a significant main effect of the congruence on intention to visit the destination ($F(1, 185) = 9.136$, $p = 0.003$). Congruence conditions lead to higher intention to visit than incongruence conditions ($M_{congruence} = 4.01$, $SD_{congruence} = 2.42$; $M_{incongruence} = 3.41$, $SD_{incongruence} = 2.03$) (Figure 36)). As for individual conditions, intention to visit the manor house are $M_{condition\ 1} = 4.24$ ($SD = 2.57$), $M_{condition\ 2} = 3.54$ ($SD = 2.01$), $M_{condition\ 3} = 3.75$ ($SD = 2.24$), and $M_{condition\ 4} = 3.27$ ($SD = 2.07$) (Figure 37).

Thus, H4b is supported.

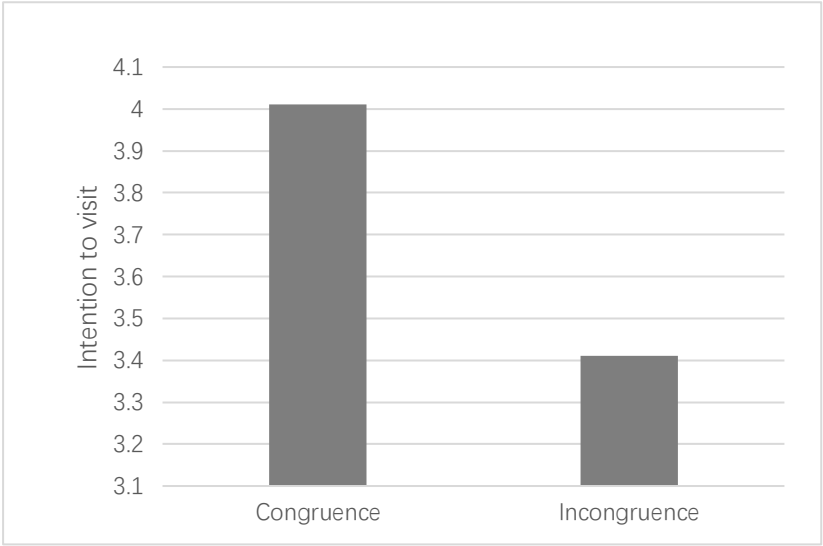


Figure 36: Intention to visit the destination between congruence and incongruence groups (Study 4(b))

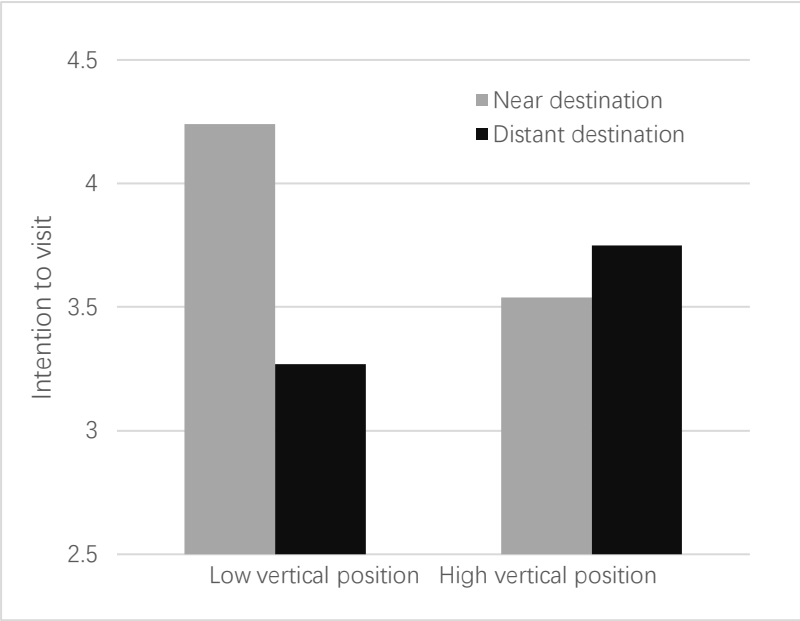


Figure 37: Intention to visit the destination in individual conditions (Study 4(b))

9.6 Discussion

The results of Study 4(b) further contribute to the knowledge gap in empirical understanding of how vertical positions in landscape photos could influence destination attitude and intention to visit.

The results of Study 4(b) demonstrate the advertising scenario when multiple advertising elements simultaneously influence destination attitude and intention to visit. Specifically, the results of Study 4(b) revealed that when consumer receive an advertisement that includes both a landscape photo of the destination and a slogan informing the spatial distance to the destination, consumers exhibit a higher attitude towards and intention to visit the destination when a nearby destination is advertised using a landscape photo taken from a low vertical position or when a distant destination is advertised using a landscape photo taken from a high vertical position. In contrast, consumers show less favourable attitude towards and intention to visit the destination when a nearby (vs. distant) destination is advertised using a landscape photo taken from a high vertical position (vs. low vertical position).

9.7 Chapter conclusion

This chapter presented detailed design and methodological choices of an experimental study to test the effect of congruence of construal level between perceived vertical position and situational spatial distance on attitude towards and intention to visit an advertised destination. This chapter included a pretest that examines a new set of visual stimuli for perceived vertical position, which has strengthened the methodological robustness of the visual manipulation technique proposed in Study 2.

A two-way between-subject experiment revealed that when the construal level of perceived vertical position and situational spatial distance are congruent (i.e. both high level or both low level), consumers showed more favourable attitude towards and intention to visit the advertised destination, supporting H4a and H4b and answering RQ5.

This chapter has examined the destination attitude and intention to visit in the scenario of matching up the construal level of advertising elements within an advertisement. Specifically, when consumer received advertisement that includes both a landscape photo of the destination and the slogan informing them of the spatial distance to the destination, consumers exhibit a higher attitude towards and intention to visit the destination when a nearby (vs. distant) destination is advertised using a landscape photo taken from a low (vs. high) vertical position.

These findings provide valuable insights for destination marketers and advertisers, emphasising the importance of considering the congruence between various advertising elements in order to maximize the effectiveness of destination advertisements.

Chapter 10: Conclusion

Chapter Content

10.1 Chapter introduction

This thesis focuses on advertisements that use landscape photos as visual materials (Figure 1) and examines how stylistic properties of landscape photos influence destination attitude and intention to visit. This thesis sets out three research objectives and corresponding research questions in an attempt to understand how landscape photos influence destination attitude and intention to visit in the context of destination advertising.

Objective 1

To identify the presence and significance of vertical position proposed in this thesis, and how it can be distinguished from visual angle and verticality in landscape photos. In the meantime, identify the most prevalent construal-representing factor (if any) in combination with landscape photos that are used in advertisements.

- RQ1: Is vertical position conceptualised in this thesis a prevalent stylistic property used in advertisements, compared with visual angle and verticality?
- RQ4: What is the most prevalent construal-representing factor accompanying landscape photos in advertisements?

Objective 2

To examine whether high vs. low vertical positions proposed in this thesis is associated with consumers' construal level (i.e. abstract or concrete thinking styles), and what is the underlying mechanism that enables the associations.

- RQ2: Does vertical position conceptualised in this thesis have an effect on construal level? &
- RQ3: If vertical position influences construal level, what is the underlying mechanism?

Objective 3

To examine whether the vertical positions with another construal-representing factor could enhance destination attitude and intention to visit when construal levels are congruent.

- RQ5: Do vertical position with another construal-representing factor have a congruence effect on attitude and intention to visit?

This thesis employed one quantitative content analysis, including a visual content analysis and a textual content analysis (Study 1) to answer research questions Q1 and Q4, fulfilling Objective 1. Two between-subjects experiments (Study 2 and Study 3) answered RQ2 and RQ3 by examining the impact of vertical position on consumers' construal level and the underlying mechanism, fulfilling Objective 2. And two experiments with 2 X 2 factorial design (Study 4 (a) and Study 4 (b)) answered RQ5 by demonstrating that congruences in construal level between vertical position and either dispositional or situation spatial distance enhance advertising effectiveness (i.e.

overall attitude towards and intention to visit the advertised destination), fulfilling Objective 3.

Each section of this chapter echoes with the research objectives and research questions, with corresponding literature review that draw on research findings. Section 10.2 supplies theoretical contributions to the literature in visual communication, the construal level theory, and advertising effectiveness using the framework of congruence in construal level. Section 10.3 demonstrates how the development of experimental stimuli contributed to the manipulations of vertical position and the manipulations of dispositional and situational spatial distance.

Section 10.4 summarises the findings and proposes actions for marketers and advertisers to take. Section 10.5 provides a summary of key contributions and managerial implications with regards to research objectives, research questions, and main findings. Finally, Section 10.6 admits limitations while providing avenues for future research.

10.2 Theoretical contributions

This thesis makes theoretical contributions by extending previous attempts on how landscape photos influence destination attitude and intention to visit. Specifically, previous studies have focused on how different types of visual content in landscape photos influence destination attitude and intention to visit. For instance, landscape photos depicting natural sceneries (e.g., natural landscapes or vegetation) increase destination attitude and intention to visit, compared with landscape photos depicting man-made sceneries (e.g., buildings) (Cackowski & Nasar, 2003; Falk & Balling, 2010; Hartmann & Apaolaza-Ibáñez, 2010, 2012). This thesis goes beyond this narrow focus and investigates how vertical positions, as the most prevalent stylistic properties of landscape photos, can influence consumers' cognition and subsequent product decisions.

To explain how vertical position affects advertising effectiveness, the thesis adopts the framework of congruence in construal level, which suggests that advertising effectiveness is enhanced when multiple factors (either an advertising element(s) or a consumer factor(s)) in an advertising practice can be represented at the same level of mental construal (both high-level and both low-level). By examining how the vertical position in landscape photos interacts with consumers' dispositional spatial distance and situational spatial distance cues, this thesis contributes to several streams of literature.

10.2.1 A new typology of stylistic property

This thesis makes a significant contribution to the literature on visual communication by proposing a new typology of stylistic property —— vertical position. The discovery of this new typology contributes to the realm of the theory of visual rhetoric by adding a new strategy to persuade and influence consumers through influencing their construal level or processing styles. This thesis argues that perceived vertical position is a distinct and prevalent stylistic property that appears in every single landscape photo. This thesis also distinguishes vertical position from other conceptualisations such as visual angle or verticality (e.g., Aggarwal and Zhao (2015); Jami (2019); Slepian et al. (2015)). To support these arguments, the visual content analysis in Study 1 revealed that perceived vertical position can be distinguished from visual angle and verticality. The analysis also reveals that vertical position is the most prevalent stylistic property of every landscape photo, as consumers can perceive varied vertical positions in each landscape photo. However, consumers may not necessarily perceive changes in visual angle and verticality. These findings hence fill the research gap in the literature review as no studies have considered vertical position as an independent construct in visual communication. Previous studies have conflated vertical positions with visual angle or verticality, which limits the understanding of the impact of vertical position on consumers' cognition and subsequent product decisions (e.g., Aggarwal and Zhao (2015); Jami (2019); Slepian et al. (2015)).

As a result, this thesis answered RQ1 and addressed Objective 1, this thesis also answered the call made by Roose et al. (2019) to treat visual angle, vertical position, and verticality in visual communication as independent construct since they may reflect different theoretical foundations and effects. Roose et al. (2019) found that visual angel, when disentangled from verticality, has an opposite effect on construal level (upward visual angle leads to high level construal and vice versa), compared with visual angle in verticality (downward visual angle leads to low level construal and vice versa). Therefore, this thesis controlled for verticality and visual angle and proposed a new typology of stylistic property —— vertical position. With the identification of perceived vertical position, this thesis then investigates how perceived vertical position in landscape photos influences advertising effectiveness.

10.2.2 A new visual antecedent of construal level

This thesis establishes perceived vertical position as a strategy of visual rhetoric by confirming its role as one of the visual antecedents of construal level. The literature on visual antecedents of construal level is unique in consumer research and is a sub-stream within the broader literature on stylistic properties. This sub-stream emerges from the necessity to understand how stylistic properties can shape consumers' perceptions and interpretations to fit into the theoretical scope of visual rhetoric (Scott, 1994; Messaris, 1996). Studies presented in Table 1 and Table 3 showcase a plethora of consumer responses to various stylistic properties. Among these responses, construal level is considered one of the most significant, explaining many marketing and advertising scenarios (e.g., Adler and Sarstedt, 2021; Lee et al., 2010). Therefore, the literature on visual antecedents of construal level (Table 3) also holds a critical position within the literature on visual communication in consumer research. This thesis contributes the perceived vertical position as a new visual antecedent of construal level, establishing its significant role in the theoretical scope of visual rhetoric.

This contribution also addresses several research gaps and controversies. The literature review has shown that whether the vertical position conceptualised in this thesis could influence construal level remains unknown and debatable (Table 3 and Table 4). To address this research gap, Study 2 and Study 3 demonstrated that high (vs. low) vertical position in landscape photos leads to a relatively high (vs. low) level of mental construal among consumers. Furthermore, these experiments effectively manipulated perceived vertical position while controlling other potential visual confounds such as visual distance, visual angle, and verticality. The effectiveness of visual manipulation was also captured by using psychometric measurement instruments. That is, the findings of two experiments have shown that perceived vertical position has a positive and significant effect on construal level. At the same time, other potential visual confounds such as visual angle and verticality are statistically controlled between high and low vertical position conditions. The findings further support the visual content analysis (Study 1) and validate the argument made in this thesis that vertical position exists independent from visual angle and verticality, and it could influence construal level independently.

Therefore, this thesis answered RQ2 and addressed Objective 2 by demonstrating that the proposed typology of vertical position is a new visual antecedent of construal level. Furthermore, with a particular focus on the theoretical underpinnings of visual antecedents in extant literature (e.g., Biliciler et al. (2021); Roose et al. (2019)), this thesis also contributed to different theoretical foundations on the effect of vertical position on construal level.

10.2.3 Mechanism that explains the effect of vertical position on construal level

This thesis is the first that tests the underlying mechanism, explaining how vertical position influences construal level, from which several contributions and contentions against existing theoretical propositions are made. Firstly, this thesis contributes to the literature on visual antecedents of construal level by introducing that

inclusion in the self is the underlying mechanism that explains the effect of vertical position on construal level. At a theoretical level, it remains inconclusive and debatable regarding what is the underlying mechanism of the effect of vertical position on construal level (Table 4) (e.g., Aggarwal and Zhao (2015); Jami (2019); Slepian et al. (2015)). This thesis considers the egocentric characteristic of psychological distance by taking the theoretical lens of the self-concept, and proposes that the feeling of being at a high vs. low vertical position influences psychological distance via how consumers position themselves in relation to the physical environment depicted in landscape photos. The findings of Study 3 further supplied evidence that the "self" plays a central role in determining psychological distance as psychological distance is "egocentric."

With an increase in perceived vertical position, people feel more detached and separated from the physical environment depicted in landscape photos. Accordingly, the separation then decreases the degree to which consumers include the depicted physical environment in the self-concept in a way of decreasing the degree to which consumers believe they are part of the depicted physical environment. This decreasing degree of inclusion in the self then increases construal level because the more individuals include the landscape as part of their self-concept, the more likely they will attend to the immediate environment (Belk, 1988; Spassova & Lee, 2013) or they will find the schematic representations of the landscape more directly retrievable and self-like (Aron et al., 1992; Aron et al., 1991; Cialdini et al., 1997; Markus, 1977; Sprott et al., 2009). Then, the immediate environment and self-like characteristics will lead to a focus on "here" and "now" at low-level construals.

Accordingly, this thesis contributes to and extends the literature on construal level theory with regard to the dimensions of psychological distance, answering RQ3 and fulfilling Objective 2. Previous studies have extensively demonstrated that psychological distance has four dimensions, including social distance that reflects interpersonal relationships (Liviatan et al., 2008; Zhao & Xie, 2011); temporal distance that describes whether an event would occur in the near or distant future

(Hernandez et al., 2015; Spassova & Lee, 2013; Tangari et al., 2010; Tangari & Smith, 2012); spatial distance that indicates the location of the event, either close (e.g., 10 miles away) or far away (e.g., 3000 miles away) (Fujita et al., 2006; Jia et al., 2021; Wang & Lehto, 2019); and hypothetical distance that proposes the probability of an event to take place (Wakslak et al., 2006). This thesis particularly argues that vertical position should be differentiated from spatial distance because spatial distance specifically addressed "where" the event is located from a nearby location or distant location, whereas changing one's vertical position does not change the relative spatial location with the event (Bar-Anan et al., 2007; Fujita et al., 2006; Hansen & Wanke, 2010). This thesis then proposes that it is crucial to think outside of the restrictions of the well-established four dimensions. This thesis considers the egocentric feature of psychological distance by adopting a novel perspective —— self-concept. From the perspective of self-concept, Study 3 examined how inclusion in the self explains the effect of vertical position on construal level. Thus, the findings of Study 3 further support the consideration of thinking outside the restrictions of four dimensions of psychological distance. In addition to theoretical contributions, the findings of Study 2 and Study 3 further supplied contentions against existing theoretical propositions made by Aggarwal and Zhao (2015), Jami (2019), and Slepian et al. (2015).

- ***Contentions against perceptual scope***

The findings of this thesis refute the propositions that perceptual scope explains the effect of vertical position on construal level as visual distance is controlled. Aggarwal and Zhao (2015) initially proposed that vertical position influences the perceptual level of construal by suggesting "being physically higher usually leads to a wider physical view from one's vantage point" (p. 122). However, as Slepian et al. (2015) argued, it is the visual distance to the visual target that influences one's perceptual scope not the vertical position. In other words, when visual distance is controlled in an experiment, the perceptual scope associated with visual distance should be taken out of the consideration. In fact, Aggarwal and Zhao (2015) also

admitted that "physical height is naturally correlated with visual distance (e.g., standing higher also tends to result in seeing farther away)" (p. 122), indicating that controlling visual distance is hard to operationalise. However, in this thesis, a pretest in Study 2 showed that actual visual distance can be controlled during the production of experimental stimuli to manipulate vertical position, indicating that actual perceptual scope can be controlled according to Slepian et al. (2015). In addition, visual distance was also measured using a psychometric measurement instrument, which revealed no difference between high and low vertical position conditions, indicating that even subjective measure of perceived visual distance is not necessarily correlated with vertical position. Furthermore, findings from Study 2 and Study 3 showed that vertical position influences construal level without changing perceived visual distance and the perceptual scope associated it, indicating the absent role of perceptual scope in influencing this focal relationship.

- ***Contentions against metaphorical associations***

Metaphorical associations are commonly used to explain how vertical position influences construal level, particularly metaphorical associations in relation to up and down vertical positions. For instance, "more is up" and "less is down", "powerful is up" and "powerless is down" (Lakoff & Johnson, 1980; Lakoff & Johnson, 1999). Accordingly, imagining going up to the first floor (vs. going down to the basement), walking up (vs. walking down), being above the object (vs. being below the object), and being physically high above the surface (vs. down below the surface) are believed to be associated with metaphors that are represented at a high-level construal (vs. low-level) such as power, happiness, and seeing the big picture (vs. weak, sadness, and seeing details) (Aggarwal & Zhao, 2015; Slepian et al., 2015).

However, this thesis argues that this explanation has two flaws in terms of theoretical foundations. Firstly, the argument that metaphorical association is the mechanism was made on the conceptualisation of verticality (Figure 12, Left), which means the vertical positions must be in an extreme scenario as one is high above (e.g.,

high in the sky) and another is down below (deep in the ocean) to enable metaphorical associations (Yan, 2012). However, it is possible that the vertical position scenario (Figure 12, Right) does not induce the feeling of being "down below." Hence, metaphorical associations based on verticality may not be activated.

Second, there is another flaw in the existing study in terms of the subject that "carries" the vertical position. That is, the foundation of metaphorical associations in relation to vertical positions are believed to explain an observed object that is located at high or low vertical position instead of explaining the perceiver who is at a high or low vertical position (Meier et al., 2007; Meier & Robinson, 2005). This is particularly critical because the relative positions between the perceiver and the observed object are actually reversed (i.e. when the object is at a high vertical position, the perceiver should be at a relatively low vertical position) (Schubert, 2005).

Findings from Study 2 and Study 3 also supported this argument. Aggarwal & Zhao (2015) and Slepian et al. (2015) argued that high verticality might be associated with "power", a high-level construal. However, Study 2 and Study 3 firstly revealed that several proposed metaphorical associations in existing literature, such as mood, arousal, and power, did not differ between high and low vertical position conditions. On this basis, the metaphorical associations "power" may not exist as proposed by Aggarwal and Zhao (2015) and Slepian et al. (2015). It is possible that participants did not experience a "down below" situation in this thesis since landscape photos always depict sceneries above the surface of the ground (Figure 12, right). In addition, the findings appear to be consistent with the argument in Meier et al. (2007) and Meier and Robinson (2005) that metaphorical associations should be originated from judging the vertical position of the observed object, not the perceivers themselves.

10.2.4 Advertising practice

This thesis contributed to filling the knowledge gap in the literature by using the framework of congruence in construal level. By adopting the framework of

congruence in construal level to explain advertising effectiveness, this thesis firstly tapped into the knowledge gap by capturing the most prevalent construal-representing factor in combination with landscape photos. And then contribute new congruence scenarios to advertising literature.

- ***Construal-representing factors appear in combination with landscape photos***

This thesis has identified the most prevalent construal-representing factor in combination with landscape photos. From a practical standpoint, although a variety of construal-representing factors appear in advertising/marketing practices (Table 2), it remains unknown which factor is the most prevalent when combined with landscape photos in advertising practices. To address this knowledge gap, this thesis followed the general guideline of construal-representing factors proposed by Trope et al. (2007) and Trope and Liberman (2010), and analysed the presence of construal-representing factors in real-life advertising practices. As a result, the textual content analysis in Study 1 revealed that spatial distance cues, compared with other construal-representing factors (i.e. social distance cues, temporal distance cues, hypothetical distance cues, primary/secondary feature cues, and desirability/feasibility cues), are the most prevalent construal-representing factors in combination with landscape photos. Specifically, spatial distance cues appear in combination with 95.2% of the landscape photos in tourism advertisements.

Therefore, findings of Study 1 not only contributed to the knowledge gap regarding construal-representing factors in real-life advertising practices but also supplied the foundation for empirical examination of advertising effectiveness, which answers RQ4 and fulfils Objective 1.

- ***Congruence in construal level and advertising effectiveness***

This thesis firstly justified the adoption of framework of congruence in construal level to explain advertising effectiveness with the discovery of spatial distance cues. Consistent with advocates of the framework of congruence in construal level in

explaining advertising effectiveness (e.g., Aggarwal and Zhao (2015); Biliciler et al. (2021); Roose et al. (2019); Spassova and Lee (2013)), the findings of Study 1 justified the adoption of framework of congruence in construal level by showing that 95.2% of the landscape photos in real-life advertising practices are accompanied by at least one construal-representing factor (i.e. spatial distance cues). With the guidance of this framework, this thesis then attempted to explain how landscape photos influences advertising effectiveness based on the textual content analysis (Study 1) and the focal relationships established in Study 2 and Study 3.

Two experiments examined how the congruence in construal level between vertical position with spatial distance enhances destination attitude and intention to visit. To increase the robustness of this congruence effect, this thesis considered two forms of spatial distance, which also echoes the basic two typical congruence scenarios: message-people congruence (e.g., Hirsh et al. (2012); Kim et al. (2016); Ryoo et al. (2017); Wang and Lehto (2019)) and message-message congruence (e.g., Biliciler et al. (2021); Fan et al. (2002); Roose et al. (2019); Stroop (1935)). To achieve this goal, this thesis operationalised spatial distance cues into both dispositional and situational cues. By doing so, this thesis added two new congruence scenarios to the empirical studies of congruence in construal level as listed in Table 2. Specifically, in the context of destination advertising, using overall attitude and behavioural intention as proxies of advertising effectiveness, Study 4 (a) demonstrated that congruence in construal level between vertical position with dispositional spatial distance induces a congruence effect that further enhances attitude towards and intention to visit the advertised destination. Similarly, Study 4 (b) demonstrated that congruence in construal level between vertical position with situational spatial distance induces a congruence effect that further enhances attitude towards and intention to visit the advertised destination. The findings further validate the adoption of framework of congruence in construal level and enhance the explainability of this framework using destination advertising. The findings of Study 4 (a) and Study 4 (b)

then contribute to the empirical studies testing the congruence in construal level (Table 2).

Study 4 (a) and Study 4 (b) also validated the theoretical underpinning of the congruence effect assumptions. In line with Zhao and Xie (2011)'s contemplation that the emergence of congruence effect is grounded in the implicit associations between construal-representing factors. Findings of Study 4 (a) and Study 4 (b) revealed that vertical position and spatial distance (either dispositional or situational) have a significant interactive effect on the overall attitude and behavioural intentions, indicating that these two construal-representing factors appear to be implicitly associated. Hence, RQ5 is answered, and Objective 3 is fulfilled.

10.3 Methodological contributions

This thesis demonstrated a detailed and robust manipulation technique of perceived vertical position to induce construal level. Previous studies did not demonstrate how to manipulate vertical positions because their manipulation techniques are based on the conceptualisations of verticality, which is a fundamentally cofounded visual construct. This thesis then provided detailed instructions on how to manipulate perceived vertical position in landscape photos that can effectively lead to changes in perceived vertical position as well as construal level. In the meantime, unlike previous studies, this manipulation technique effectively controls perceived visual angle, perceived visual distance, and perceived verticality. As demonstrated in Study 2, the pretest examined five vertical positions relative to a landscape scenery (i.e. beach) (Figure 19). The pretest then determined which pairs of vertical position can effectively reproduce significant difference in perceived vertical position while controlling perceived visual angle, perceived visual distance, and perceived verticality. The main study of Study 2 and Study 3 further demonstrated that the manipulation of perceived vertical position leads to a significant difference in consumers' level of mental construal. In addition, in Study 4(b), another pretest further strengthened the robustness of this manipulation technique by using a different

landscape scenery (i.e. manor house). The findings also showed that the manipulation of perceived vertical position can be reproduced, enhancing the robustness of the manipulation technique proposed in Study 2.

This thesis also demonstrated the manipulations of dispositional and situational spatial distance in a systematic manner. In Study 4 (a), a pretest has developed experimental stimuli that is used to manipulate one's dispositional spatial distance. In this pretest, participants are asked to imagine planning a trip to either a distant (i.e. international trip) or a nearby (i.e. domestic trip) location, and this has successfully changed consumers' dispositional spatial distance. In Study 4 (b), consumers are notified with the two slogans using different wording, the near spatial distance slogan reads "explore Manor House in Brighton" (i.e. a domestic trip) while the distant spatial distance slogan reads "explore Manor House in the Czech Republic" (i.e. an international trip). Manipulation checks revealed that these two slogans successfully changed consumers' situational spatial distance. The findings showcase robust manipulations of dispositional and situational spatial distance using either distant/international or nearby/domestic locations.

10.4 Managerial implications

Marketers and advertisers often consider landscape photos are crucial visual communication tools in facilitating consumers' purchase decisions. One the one hand, advertisers can decide whether to feature natural or man-made landscape sceneries (Cackowski & Nasar, 2003; Falk & Balling, 2010; Hartmann & Apaolaza-Ibáñez, 2010, 2012). One the other hand, they can also produce stylistic properties in the photo production process, such as using different visual angles or verticality, which certainly play an important role in enhancing advertising effectiveness (e.g., Jami (2019); Roose et al. (2019); Slepian et al. (2015)). This thesis generates some interesting practical implications for advertisers and marketing managers.

- ***Vertical position in landscape photos***

This thesis proposed and validated that vertical position is a new stylistic property capable of influencing consumers' information processing styles (construal level) and subsequent evaluations of advertisements. In addition to existing stylistic properties such as visual angle, verticality, and visual perspective, managers or advertisers can also consider vertical position as one of their design options when producing landscape photos. Furthermore, this thesis revealed that vertical position is highly accessible as it exists in every single landscape photo, unlike other common stylistic properties such as visual angle and verticality, which only exist in roughly half of the landscape photos (Study 1). This accessibility makes vertical position a more feasible design option for advertisers to use when employing stylistic properties as a persuasion strategy.

- ***Impact of vertical position on construal level and congruence in construal level***

This thesis recommends that marketers and advertisers consider the framework of congruence in construal level when designing effective advertisements. The adoption of the framework of congruence in construal level has been justified by the finding that landscape photos in real-life advertising practices are accompanied by construal-representing factors, such as spatial distance cues (in 95.2% of the landscape photos), social distance cues, primary/secondary feature cues, and desirability/feasibility cues. With the guidance of this framework, this thesis provides further suggestions on how advertisers can enhance advertising effectiveness by creating congruence between the construal level induced by the landscape photo and the message conveyed in the advertisement.

Advertisers and marketers should consider tailoring the use of high vs. low vertical positions in landscape photos depending on the advertised products/services. This thesis has revealed that landscape photos depicting high vs. low vertical positions can influence consumer’s construal level. According to the framework of congruence

in construal level, consumers prefer product choices that can be represented at the same level of mental construal. Hence, when advertisers need to highlight the high-level construal aspects (vs. low-level construal) of the advertised products or services, the advertisement could use a landscape photo taken from a high (vs. low) vertical position. For instance, landscape photos should be taken from a high (vs. low) vertical position when advertisers/marketers need to promote the product that focus more on its primary features (vs. secondary features) such as sound quality of a radio (vs. accuracy of a clock on that radio) (Martin et al., 2009); more on desirability aspect (vs. feasibility aspect) such as software with great features but hard to use (vs. easy-to-use software with limited features) (Fujita et al., 2008); more on benefit-based product (vs. attribute-based product) (Hernandez et al., 2015); or more on product with distant future benefits (vs. product with near future benefits) (Roose et al., 2019). Similarly, landscape photos depicting high vertical position (vs. low vertical position) need to be accompanied by claims using abstract language (vs. concrete language) (Kim et al., 2016; Lee et al., 2010; Park, 2020; Wang & Lehto, 2019) or emotional appeals (vs. rational appeals) (Kim et al., 2019).

In line with the congruence framework, advertisers and marketers should also consider tailoring high vs. low vertical positions in landscape photos to cater for their target audience' mental state. Consumers' prefer messages that are congruent with their internal state (Hirsh et al., 2012), and their internal state can also be represented at high vs. low-level of construal. In this situation, it is crucial for advertisers to tailor high vs. low positions in landscape photos when disseminating to their target audience. For instance, messages conveyed in landscape photos taken from a high (vs. low) vertical position may be more persuasive for consumers with dispositional abstract (vs. concrete) thinking style (Ryoo et al., 2017; White et al., 2011); consumers with interdependence self-construal (vs. independence) (Spassova & Lee, 2013); consumers with promotion focus (vs. prevention focus) (Lee et al., 2010); consumers with success processing (vs. failure processing) (Park & Hedgcock, 2016); or consumers with future temporal orientation (vs. immediate future orientation)

(Tangari et al., 2010). To validate these recommendations, this thesis then tested two congruence scenarios in the context of destination advertising, where more specific recommendations are made.

This thesis empirically examined the congruence in construal level in the context of destination advertising and offers practical recommendations for tourism advertisers in designing effective advertisements. Firstly, for personalised advertisements, such as search engine optimisation or pop-up ads on websites, landscape photos of tourism attractions taken from a high vertical position can be distributed or presented to potential consumers when they have searched or booked a trip to a distant location such as an international trip. Also, landscape photos of tourism attractions taken from a low vertical position can be distributed to potential consumers when they have searched or booked a trip to a nearby location, such as a domestic trip. By doing so, advertisers can enhance consumers' attitude towards and intention to visit new or peripheral attractions that might not originally in consumers' travel plans.

Second, for mass communication advertisements, advertisers can promote a nearby (e.g., domestic) destination by using landscape photos taken from a low vertical position, and promote a distant (e.g., international) destination by using landscape photos taken from a high vertical position. This can attract potential travellers by enhancing their attitude towards and intention to visit the destination. These design methods rely on the congruence between advertising elements, which can be applied to billboard advertising, television, print media and other mass communication channels.

10.5 Summary of study contributions

Table 29 summarises key study contributions to theory and methodology and corresponding managerial implications in relation to the research objectives, research questions, main findings, and debate in extant literature.

Table 29: A summary of key study contributions

Objectives and research questions	Main findings	Findings and debate in extant literature	Theoretical & methodological contribution	Managerial implications
Objective 1 To identify the presence and significance of vertical position proposed in this thesis, and how it can be distinguished from visual angle and verticality in landscape photos. In the meantime, identify the most prevalent construal-representing factor (if any) in combination with landscape photos that are used in advertisements. • RQ1: Is vertical position conceptualised in this thesis a prevalent stylistic property used in advertisements, compared with visual angle and verticality?	**1.** Vertical position is the most prevalent stylistic property of landscape photos (100%), compared with other stylistic properties such as visual angle (54.2%) and verticality (50.6%).	Previous studies on stylistic properties (Table 1) have not mentioned vertical position, and its conceptualisations have always been confounded with verticality and visual angle (e.g., Aggarwal and Zhao (2015); Jami (2019); Slepian et al. (2015)).	This thesis disentangled vertical position from visual angle or verticality and contributed a new typology of stylistic properties —— vertical position.	Vertical position is the most accessible option for marketers and advertisers to consider when they use stylistic properties to design advertising photos.
	2. The frequencies of conventional construal-representing factors that accompany landscape photos are discovered using	No studies have empirically evidenced which construal-representing factor is the most prevalent, and how appropriate is the framework of congruence in construal level.	• This thesis contributed to the knowledge gap by discovering that spatial distance cues appear in 95.2% of landscape photos in the context of destination advertising. • The findings further justify the	Marketers and advertisers should prioritise the framework of congruence in construal level when designing effective advertisements.

• RQ4: What is the most prevalent construal-representing factor accompanying landscape photos in advertisements?	textual content analysis.		adoption of the framework of congruence in construal level as landscape photos appear to be in combination with varied construal-representing factors.	
Objective 2 To examine whether high vs. low vertical positions proposed in this thesis is associated with consumers' construal level (i.e. abstract or concrete thinking styles), and what is the underlying mechanism that enables the associations. • RQ2: Does vertical position conceptualised in this thesis have an effect on construal level? & • RQ3: If vertical position influences construal level, what is the underlying mechanism?	**3.** Perceived vertical position influences construal level, and this effect is partially mediated by inclusion of the landscape in the self.	Previous studies have always confounded vertical position with either visual angle (Aggarwal and Zhao (2015)) or verticality (Slepian et al. (2015); Jami (2019)), and their findings regarding the effects of vertical position on construal level are inconsistent (Table 4). No studies have empirically examined the underlying mechanism of how vertical position influences construal level, and their discussions regarding the underlying mechanism are debatable (e.g., Aggarwal and Zhao (2015);	• Contributed vertical position as a new visual antecedent of construal level (Table 3). • Inclusion in the self partially mediates the effect of vertical position on construal level. This finding refuted the theoretical underpinning (i.e. perceptual scope and metaphorical associations) proposed by Aggarwal and Zhao (2015) and Slepian et al. (2015) and the moderating factor (i.e. perceptual scope) proposed by Jami (2019). • This study extended the understanding of psychological distance from the perspective of self-concept. This study was not limited by the conventional four dimensions of psychological distance in construal level theory (e.g., Liviatan	Guided by the framework of congruence in construal level, the following suggestions may help marketers and advertisers to achieve persuasive messages: • Consider choosing landscape photos taken from high (vs. low) vertical position to advertise products that have abstract (vs. concrete) claims, high in desirability (vs. feasibility) considerations, more on primary (vs. secondary) features, and long-term benefit (vs. immediate benefit), etc. • Consider tailoring landscape photos taken from high (vs. low) vertical position to deliver message to consumers who have abstract (vs. concrete) thinking style, interdependence self-construal (vs.

		Jami (2019); Slepian et al. (2015))	et al., (2008); Hernandez et al., (2015); Spassova & Lee, (2013); Fujita et al., (2006); Jia et al., (2021); Wakslak et al., (2006). • This study demonstrated a detailed and robust manipulation technique of perceived vertical position to induce construal level while controlling perceived visual angle, perceived verticality, and perceived visual distance.	independence), promotion focus (vs. prevention focus), success processing (vs. failure processing), future temporal orientation (vs. immediate future orientation), etc.
Objective 3 To examine whether the vertical positions with another construal-representing factor could enhance destination attitude and intention to visit when construal levels are congruent. • RQ5: Do vertical position with another construal-representing factor have a congruence effect on attitude and intention to visit?	**4.** The congruence in construal level between vertical position with dispositional spatial distance induces a congruence effect that enhances attitude towards and intention to visit the advertised destination.	Previous studies have not examined if vertical position in landscape photos with another construal-representing factor would lead to a congruence effect that enhances message persuasiveness (Table 2).	• Contributed two more congruence scenarios to empirical studies of congruence in construal level (Table 2). • Validated implicit associations between vertical position and spatial distance that enables congruence effect, in line with Zhao and Xie (2011)'s proposition. • Demonstrated the manipulations of dispositional and situational spatial distance in a systematic manner. • This study revalidated the	• Landscape photos of tourism attractions that are taken from a high vertical position can be distributed or presented to potential consumers when they have searched or booked a trip to a distant location, such as an international trip. • On the other hand, landscape photos of tourism attractions that are taken from a low vertical position can be distributed to potential consumers when they have searched or booked a trip to a nearby location, such as a domestic trip.

	5. The congruence in construal level between vertical position with situational spatial distance induces a congruence effect that enhances attitude towards and intention to visit the advertised destination.		proposed manipulation of vertical position by enhancing its robustness with another landscape scenery.	• Advertisers could advertise a nearby (e.g., domestic) attraction by using landscape photos taken from a low vertical position. • On the other hand, advertisers could promote a distant (e.g., international) attraction by using landscape photos taken from a high vertical position.

10.6 Limitations and future directions

10.6.1 Applications of stylistic properties

This thesis acknowledges several limitations that could be explored or improved in future studies. First and foremost, this thesis only examined the impact of vertical position in landscape photos. Although vertical position appears to be the most prevalent stylistic property of landscape photos, it is possible that in advertising reality, multiple stylistic properties, such as visual angle, visual distance, or verticality may coexist in the same landscape photo and interact with each other. Similar to Orth et al. (2020), whose study investigated the interaction between human heights and human visual angles on product evaluations, future studies can explore how multiple stylistic properties interact with each other and subsequently influence consumers' product choices. Furthermore, future research could investigate if there exists any superiority effect of individual stylistic properties to resolve the debatable findings in Aggarwal and Zhao (2015), Jami (2019), and Slepian et al. (2015).

Secondly, it is common for stylistic properties to be transferrable between product photos and landscape photos such as visual distance, visual angle, and verticality (e.g., Jami (2019); Kim et al. (2019); Peracchio and Meyers-Levy (1992); Roose et al. (2019)). Since vertical position is a salient visual experience in landscape photos, future research could enhance its robustness by investigating if vertical position remains a salient stylistic property when applied in product photos (non-landscape photos).

10.6.2 Underlying mechanisms

The identification of a new mediator leads to more avenues for future research to make theoretical contributions. To elaborate, this thesis found that the inclusion in the self partially mediates the effect of perceived vertical position on construal level, indicating that there are still undiscovered mechanisms that explain the effect of

vertical position on construal level. However, since this thesis refuted some existing arguments, such as perceptual scope and conceptual metaphor, future research may need to propose and test other new potential mechanisms that explain the effect of vertical position on construal level from more novel theoretical perspectives.

The identification of the new mediator also provides avenues to investigate its downstream impact of inclusion in the self. In line with the predictions made by Belk (1988), Escalas (2004) and Sprott et al. (2009), future studies could investigate whether landscape photos taken from low vertical positions can lead to consumer's pro-environmental behaviour through the inclusion of the landscape in their self-concept. Additionally, future research could explore whether landscape photos taken from low vertical positions can enhance consumers' overall evaluations of the landscape sceneries and subsequent behavioural intentions, compared with landscape photos taken from high vertical positions.

10.6.3 Expanding advertising context

Several limitations also emerge regarding the research context when testing advertising effectiveness. This thesis adopted purposive sampling to select landscape photos from tourism websites that substantiate landscape images. Subsequently, the thesis performed content analysis in the context of tourism advertisements. However, this approach has, to some extent, limited the research scope of experimental studies. Firstly, the thesis only tested two types of destinations (i.e., beaches and manor houses). Future research may extend the scope by testing other tourism products or services, such as hotels and theme parks.

Although destination advertising substantiates the use of landscape photos, as recognised in Figure 1, landscape images with varied vertical positions are also employed in other advertising contexts, such as automobiles, luxury products, beverages, and sportswear, etc. However, it is unknown whether other research contexts will introduce potential factors that may enhance or diminish the impact of vertical position in landscape photos, resulting an impact on the explanatory power of

vertical position and the construal level associated with it. And it is essential to revalidate theory and broaden the research scope in empirical studies. However, these potential factors are yet discovered in existing studies, future research can investigate and explore other contexts to gain a holistic understanding of advertising and the role of potential factors at play. Future research can explore other advertising contexts, such as luxury products and automobiles, to uncover potential factors in the consumer decision-making process and their interplay with vertical position. In doing so, future research can elucidate the role and significance of vertical position in explaining advertising effectiveness across advertising contexts.

10.6.4 Congruence scenarios

Future research may also exam congruence scenarios involving more than two construal-representing factors. The present study only considered two specific construal representing factors (i.e. vertical position and spatial distance) in both a message-message congruence and a message-people congruence scenarios. Future research could investigate the congruence in construal level between vertical position and other construal-representing factors that appear in other advertising practice such as vertical position + temporal distance. It is necessary for future research to investigate more combinations of construal-representing factors to validate the framework of congruence in construal level (Kim et al., 2008; Zhao & Xie, 2011).

In addition, it is possible that more than two construal-representing factors exist in a single advertising practice (Peracchio & Meyers-Levy, 2005). For instance, congruence effect should also occur when three advertising elements are congruent (i.e. message-message-message congruence) (e.g., Peracchio and Meyers-Levy (1994)), or when two advertising elements and one consumer factor are congruent (i.e. message-message-people congruence) (e.g., Wang and Lehto (2019)). Although multiple-factor scenarios reflect a more complex reality, they are believed to abide by the framework of congruence effects. Hence, future studies could extend the

complexity of congruence scenarios by adding more construal-representing factors to exam if the multiple-way interactions enhance advertising effectiveness.

10.6.5 Advertising effectiveness proxies

While this study investigated the impact of perceived vertical positions in landscape photos on destination attitude and intention to visit, it is important to acknowledge certain limitations regarding using these two proxies to represent advertising effectiveness. It is possible that this thesis is confined to destination attitude and visit intention in destination advertising only. Future research endeavours may consider broadening the scope by examining additional proxies of advertising effectiveness, such as brand or message recall (Wilson & Till, 2008), ad click (Bhat et al., 2002), or actual behaviour or visitation (Alhemoud & Armstrong, 1996; Woodside & Lysonski, 1989; Danaher et al., 2020) to provide a more comprehensive understanding of nuanced elements contributing to the advertising effectiveness.

10.6.6 Methodological Innovations

- ***Enhancing ecological validity***

From a methodological perspective, the stimuli in the current experimental studies are verified to control possible confounds. It is important to acknowledge that the primary focus of the current design is to prioritise internal validity, ensuring the accuracy and reliability of the experimental results within the controlled environment. However, prioritising the rigor of internal validity entails a trade-off with ecological validity. In other words, the visual stimuli in the current experiments may be perceived as over-engineered and unrealistic. Future research can adopt real photos used in real-life advertisements, such as the photos extracted in Study 1, to enhance the ecological validity of the experiments.

Additionally, since internal validity is the focus of this thesis, the current experiments were conducted in a well-controlled setting using scenario-based

experimental design. Future research endeavours could benefit from shifting towards field experiments instead of relying solely on scenario-based experiments. Field experiments offer opportunities to observe and manipulate variables in authentic, real-world settings, thereby enhancing the ecological validity of the findings (Andrade, 2018). Following the path of this thesis, this can be achieved by conducting experiments directly on online booking webpages where destination advertisements are prevalent. Researchers can capture a more accurate representation of human behaviour and decision-making processes.

- ***Human factor in visual perception***

In terms of visual perception, his thesis acknowledges that some people may not be sensitive to pictorial depiction of vertical position. Given the visual perception of vertical position is a subjective visual experience (Arnheim, 1957), future research could also explore the subjective threshold on perceived vertical position sensitivity to advance the proposition and refine the manipulation of perceived vertical position on construal level.

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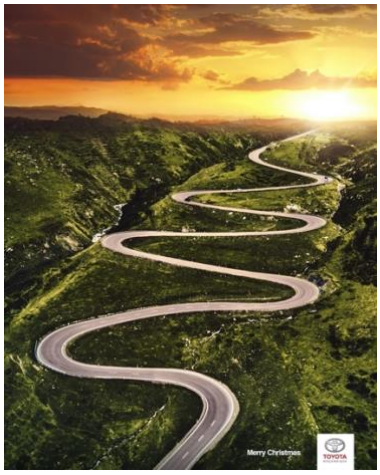
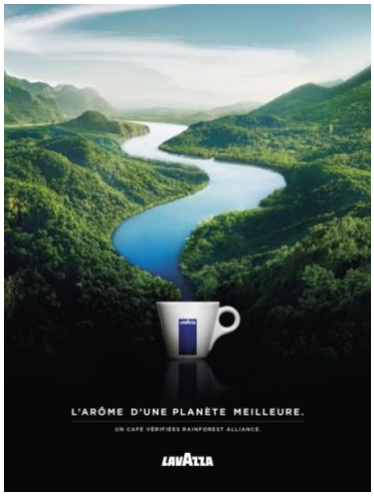
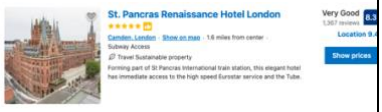
Appendix A: Advertisement examples using landscape photos

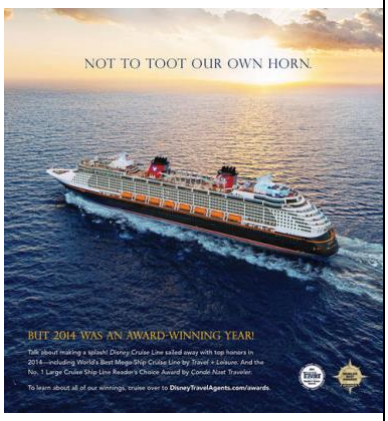
Examples of application of landscape photos in advertisements

Brands	Advertisements	Year of release	Source
Nike		2016	https://www.forbes.com/sites/michellegreenwald/2014/07/10/secrets-of-7-of-the-most-effective-ad-campaigns/?sh=84d9644320c2
Under Amour		2021	https://www.adsoftheworld.com/media/print/under_armour_proud_paths
Ermenegildo Zegna		2021	Taken by the author
Toyota		2020	https://www.adsoftheworld.com/media/print/toyota_merry_christmas_0

TOYOTA		2018	https://www.adsoftheworld.com/media/print/toyota_choose_everything_tokyo
BMW		2015	https://designyoutrust.com/2015/10/beautifully-designed-bmw-ads-show-aerial-view-of-roads-that-look-like-guitars-violins/
BMW		2014	https://www.autoevolution.com/news/inception-inspired-bmw-x4-commercial-tells-you-to-embrace-the-unknown-video-82976.html
Pegasus		2018	https://www.adsoftheworld.com/media/print/pegasus_airlines_if_you_havent_seen_it_yet_uk
Breitling		2021	https://www.breitling.com/us-en/news/details/kicking-into-gear-34538
FIJI		2015-Present	https://www.fijiwater.com/

Lavazza		2018	https://www.adsoftheworld.com/media/print/lavazza_the_aroma_of_a_better_planet
WHO		2020	https://www.adsoftheworld.com/media/outdoor/survival_agency_covid19_invasion
WWF		2020	https://wwf.panda.org/discover/about_wwf/50_years_of_achievements/50th_advertisements/?
WWF		2009	https://www.adsoftheworld.com/media/print/wwf_lungs
Booking		2021	https://www.booking.com/index.en-gb.html
Booking		2021	https://www.booking.com

Booking		2021	https://www.booking.com
TUI		2021	https://www.tui.co.uk/
TUI		2021	https://www.tui.co.uk
Apple		2009	https://www.adsoftheworld.com/media/print/ipod_irun
Apple		2009	http://www.adeevee.com/2009/04/apple-ipod-shuffle-irun-icommute-irelax-ibike-print/
Inikin		2021	https://m.weibo.cn/1222135407/4669415294242158

Disney		2018	http://www.mousescrappers.com/forums/showthread.php?t=16883
Disney		2021	https://www.vacationwiththemagic.com/disney-cruise-line/
Celebrity Cruise		2021	https://www.ispot.tv/ad/7eZe/celebrity-cruises-remember-everything
Celebrity Cruise		2021	https://www.yankeetrails.com/cruise/specials/celebrity-12nightsoutherncaribbean-22dec2021/

Appendix B: Category Inclusiveness Task

Please indicate the extent to which the following three objects can represent FURNITURE?

	1	2	3	4	5	6	7	8	9	10
Chair (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Lamp (2)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Telephone (3)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Please indicate the extent to which the following three objects can represent WEAPON?

	1	2	3	4	5	6	7	8	9	10
Gun (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Whip (2)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Shoes (3)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Please indicate the extent to which the following three objects can represent TOY?

	1	2	3	4	5	6	7	8	9	10
Doll (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Balloon (2)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Books (3)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Please indicate the extent to which the following three objects can represent VEHICLE?

	1	2	3	4	5	6	7	8	9	10
Car (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Yacht	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

(2) Elevator (3)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Appendix C: Personal Involvement Inventory

To you, XXX is: (XXX is replaced by the name of the product/service)

	1	2	3	4	5	6	7	
Unimportant	☐	☐	☐	☐	☐	☐	☐	Important
Irrelevant	☐	☐	☐	☐	☐	☐	☐	Relevant
Means nothing	☐	☐	☐	☐	☐	☐	☐	Means a lot to me
Worthless	☐	☐	☐	☐	☐	☐	☐	Valuable
Boring	☐	☐	☐	☐	☐	☐	☐	Interesting
Unexciting	☐	☐	☐	☐	☐	☐	☐	Exciting
Unappealing	☐	☐	☐	☐	☐	☐	☐	Appealing
Mundane	☐	☐	☐	☐	☐	☐	☐	Fascinating
Not needed	☐	☐	☐	☐	☐	☐	☐	Needed
Uninvolving	☐	☐	☐	☐	☐	☐	☐	Involving

Appendix D: Sample questionnaire of Study 2

Cover Story

Please imagine that you are planning a vacation trip to a beach. As the photo shows, a tourist company discovered a new beach and named it ECHUCA. This company took a photo for ECHUCA beach and the company is interested in obtaining some feedback from customers about this advertising photo before releasing the advertisement. Please watch the photo and give feedback as if you are a customer.

Vertical Position Stimuli

Either one from Figure 21 (a) and Figure 21 (b) will be presented to the participants randomly.

Figure 21: Visual manipulation of vertical positions

Visual manipulations of low vertical position

(a)

Visual manipulations of high vertical position

(b)

Vertical position (Manipulation Check)

Q1 When watching this photo, how high this picture makes you feel?

	1	2	3	4	5	6	7	8	9	10	
Very low	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very high

Construal Level (Dependent Variable)

Q2 Please indicate the extent to which the following three objects can represent FURNITURE?

	1	2	3	4	5	6	7	8	9	10
Chair (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Lamp (2)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Telephone (3)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q3 Please indicate the extent to which the following three objects can represent WEAPON?

	1	2	3	4	5	6	7	8	9	10
Gun (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Whip (2)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Shoes (3)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q4 Please indicate the extent to which the following three objects can represent TOY?

	1	2	3	4	5	6	7	8	9	10
Doll (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Balloon (2)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Books (3)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q5 Please indicate the extent to which the following three objects can represent VEHICLE?

	1	2	3	4	5	6	7	8	9	10
Car (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Yacht (2)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Elevator (3)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Visual distance (Control Variable)

Q6 When watching this photo, how far away do you feel this beach is from you?

	1	2	3	4	5	6	7	8	9	10	
Very near	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very far

Visual angle (Control Variable)

Q7 When watching this photo, to what extent do you imagine looking down versus looking up?

	1	2	3	4	5	6	7	
Looking down	☐	☐	☐	☐	☐	☐	☐	Looking up

Verticality (Control Variable)

Q8 Given the landscape photo that you have just watched, to what extent do you imagine being underground versus above ground?

	1	2	3	4	5	6	7	
Underground	☐	☐	☐	☐	☐	☐	☐	Above ground

Q9 Given the landscape photo that you have just watched, to what extent do you imagine being somewhere low versus somewhere high?

	1	2	3	4	5	6	7	
Low	☐	☐	☐	☐	☐	☐	☐	High

Q10 Given the landscape photo that you have just watched, to what extent do you imagine being below the surface versus high up?

	1	2	3	4	5	6	7	
Below the surface	☐	☐	☐	☐	☐	☐	☐	High up

Mood, Arousal, and Power (Control Variable)

Q11 How do you feel right now when watching the photo?

	1	2	3	4	5	6	7	8	9	
I feel very unpleasant	☐	☐	☐	☐	☐	☐	☐	☐	☐	I feel very pleasant
I feel calm	☐	☐	☐	☐	☐	☐	☐	☐	☐	I feel excited
I feel very powerless	☐	☐	☐	☐	☐	☐	☐	☐	☐	I feel very powerful

Demographics, Involvement, and Familiarity

(Control Variables)

Gender

Q12 Your gender:

- ☐ Male (1)
- ☐ Female (2)
- ☐ Not specified (3)

Age

Q13 Your age:

- ☐ Under 18 (1)
- ☐ 18 - 24 (2)
- ☐ 25 - 34 (3)
- ☐ 35 - 44 (4)
- ☐ 45 - 54 (5)
- ☐ 55 - 64 (6)
- ☐ 65 - 74 (7)
- ☐ 75 - 84 (8)
- ☐ 85 or older (9)
- ☐ Prefer not to say (10)

Marital Status

Q14 Your marital status:

- ☐ Married (1)
- ☐ Widowed (2)
- ☐ Divorced (3)
- ☐ Separated (4)
- ☐ Single (5)
- ☐ Prefer not to say (6)

Involvement

Q15 To you, a beach is:

	1	2	3	4	5	6	7	

Unimportant	☐	☐	☐	☐	☐	☐	☐	Important
Irrelevant	☐	☐	☐	☐	☐	☐	☐	Relevant
Means nothing	☐	☐	☐	☐	☐	☐	☐	Means a lot to me
Worthless	☐	☐	☐	☐	☐	☐	☐	Valuable
Boring	☐	☐	☐	☐	☐	☐	☐	Interesting
Unexciting	☐	☐	☐	☐	☐	☐	☐	Exciting
Unappealing	☐	☐	☐	☐	☐	☐	☐	Appealing
Mundane	☐	☐	☐	☐	☐	☐	☐	Fascinating
Not needed	☐	☐	☐	☐	☐	☐	☐	Needed
Uninvolving	☐	☐	☐	☐	☐	☐	☐	Involving

Familiarity

Q16 How familiar are you with a beach called ECHUCA?

	1	2	3	4	5	6	7	8	9	10	
Not at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very much

Q17 How much do you know about ECHUCA beach?

	1	2	3	4	5	6	7	8	9	10	
Not at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very much

Q18 How often do you think about ECHUCA beach?

	1	2	3	4	5	6	7	8	9	10	
No at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very much

Appendix E: Sample questionnaire of Study 3

Cover Story

Please imagine that you are planning a vacation trip to a beach. As the photo shows, a tourist company discovered a new beach and named it ECHUCA. This company took a photo for ECHUCA beach and the company is interested in obtaining some feedback from customers about this advertising photo before releasing the advertisement. Please watch the photo and give feedback as if you are a customer.

Vertical Position Stimuli

Either one from Figure 21 (a) and Figure 21 (b) will be presented to the participants randomly.

Figure 21: Visual manipulation of vertical positions

Visual manipulations of low vertical position

(a)

Visual manipulations of high vertical position

(b)

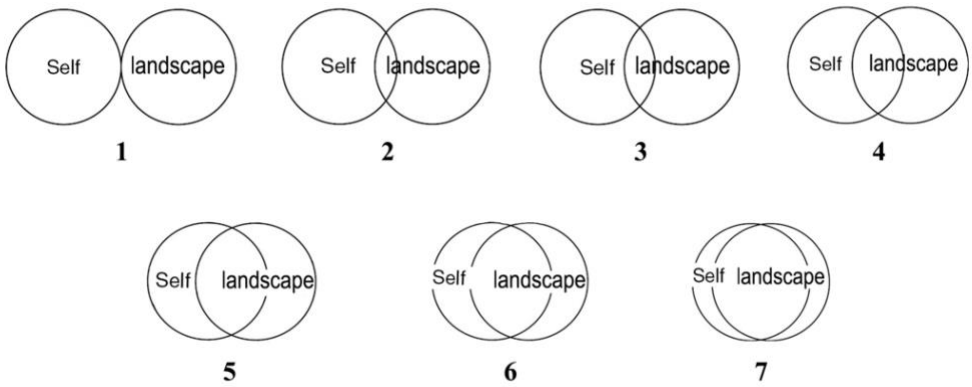
Vertical position (Manipulation Check)

Q1 When watching this photo, how high this picture makes you feel?

	1	2	3	4	5	6	7	8	9	10	
Very low	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very high

Inclusion in the self (Mediator)

Q2 Please choose the picture below (from Picture 1 to Picture 7) that best describes your relationship with the landscape depicted in the photo.



1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Construal Level (Dependent Variable)

Q2 Please indicate the extent to which the following three objects can represent FURNITURE?

	1	2	3	4	5	6	7	8	9	10
Chair (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Lamp (2)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Telephone (3)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q3 Please indicate the extent to which the following three objects can represent WEAPON?

	1	2	3	4	5	6	7	8	9	10
Gun (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Whip (2)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Shoes (3)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q4 Please indicate the extent to which the following three objects can represent TOY?

	1	2	3	4	5	6	7	8	9	10
Doll (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Balloon (2)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Books (3)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q5 Please indicate the extent to which the following three objects can represent VEHICLE?

	1	2	3	4	5	6	7	8	9	10
Car (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Yacht (2)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Elevator (3)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Visual distance (Control Variable)

Q6 When watching this photo, how far away do you feel this beach is from you?

	1	2	3	4	5	6	7	8	9	10	
Very near	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very far

Visual angle (Control Variable)

Q7 When watching this photo, to what extent do you imagine looking down versus looking up?

	1	2	3	4	5	6	7	
Looking down	☐	☐	☐	☐	☐	☐	☐	Looking up

Verticality (Control Variable)

Q8 Given the landscape photo that you have just watched, to what extent do you imagine being underground versus above ground?

	1	2	3	4	5	6	7	
Underground	☐	☐	☐	☐	☐	☐	☐	Above ground

Q9 Given the landscape photo that you have just watched, to what extent do you imagine being somewhere low versus somewhere high?

	1	2	3	4	5	6	7	
Low	☐	☐	☐	☐	☐	☐	☐	High

Q10 Given the landscape photo that you have just watched, to what extent do you imagine being below the surface versus high up?

	1	2	3	4	5	6	7	
Below the surface	☐	☐	☐	☐	☐	☐	☐	High up

Mood, Arousal, and Power (Control Variable)

Q11 How do you feel right now when watching the photo?

	1	2	3	4	5	6	7	8	9	
I feel very unpleasant	☐	☐	☐	☐	☐	☐	☐	☐	☐	I feel very pleasant
I feel calm	☐	☐	☐	☐	☐	☐	☐	☐	☐	I feel excited
I feel very powerless	☐	☐	☐	☐	☐	☐	☐	☐	☐	I feel very powerful

Demographics, Involvement, and Familiarity

(Control Variables)

Gender

Q12 Your gender:

- ☐ Male (1)
- ☐ Female (2)
- ☐ Not specified (3)

Age

Q13 Your age:

- ☐ Under 18 (1)
- ☐ 18 - 24 (2)
- ☐ 25 - 34 (3)
- ☐ 35 - 44 (4)
- ☐ 45 - 54 (5)
- ☐ 55 - 64 (6)
- ☐ 65 - 74 (7)
- ☐ 75 - 84 (8)
- ☐ 85 or older (9)
- ☐ Prefer not to say (10)

Marital Status

Q14 Your marital status:

- ☐ Married (1)
- ☐ Widowed (2)
- ☐ Divorced (3)
- ☐ Separated (4)
- ☐ Single (5)
- ☐ Prefer not to say (6)

Involvement

Q15 To you, a beach is:

	1	2	3	4	5	6	7	
Unimportant	☐	☐	☐	☐	☐	☐	☐	Important
Irrelevant	☐	☐	☐	☐	☐	☐	☐	Relevant
Means nothing	☐	☐	☐	☐	☐	☐	☐	Means a lot to me
Worthless	☐	☐	☐	☐	☐	☐	☐	Valuable
Boring	☐	☐	☐	☐	☐	☐	☐	Interesting
Unexciting	☐	☐	☐	☐	☐	☐	☐	Exciting
Unappealing	☐	☐	☐	☐	☐	☐	☐	Appealing
Mundane	☐	☐	☐	☐	☐	☐	☐	Fascinating
Not needed	☐	☐	☐	☐	☐	☐	☐	Needed
Uninvolving	☐	☐	☐	☐	☐	☐	☐	Involving

Familiarity

Q16 How familiar are you with a beach called ECHUCA?

	1	2	3	4	5	6	7	8	9	10	
Not at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very much

Q17 How much do you know about ECHUCA beach?

	1	2	3	4	5	6	7	8	9	10	
Not	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very

at all		much

Q18 How often do you think about ECHUCA beach?

	1	2	3	4	5	6	7	8	9	10	
No at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very much

Appendix F: Sample questionnaire of Study 4 (a)

Cover Story

Imagine that you are planning a vacation trip. When searching tourist information online, you come across this advertisement promoting tourist attractions.

Dispositional Spatial Distance Stimuli

Either one of the following stimuli will be presented to the participants randomly.

Near dispositional spatial distance manipulation: Imagine that you are planning a vacation trip to **an international seaside city** where you have to **take an airplane for 15 hours**. When searching tourist information of this city online, you come across this advertising photo promoting a newly discovered beach called ECHUCA which is located within 30 minutes from the port of this city by ferry.

OR

Distant dispositional spatial distance manipulation: Imagine that you are planning a vacation trip to **an international seaside city** where you have to **take an airplane for 15 hours**. When searching tourist information of this city online, you come across this advertising photo promoting a newly discovered beach called ECHUCA which is located within 30 minutes from the port of this city by ferry.

Vertical Position Stimuli

Either one from Figure 21 (a) and Figure 21 (b) will be presented to the participants randomly.

Figure 21: Visual manipulation of vertical positions

Visual manipulations of low vertical position	Visual manipulations of high vertical position
	
(a)	(b)

Vertical position (Manipulation Check)

Q1 When watching this photo, how high this picture makes you feel?

	1	2	3	4	5	6	7	8	9	10	
Very low	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very high

Spatial distance (Manipulation Check)

Q2 Geographically, how far away do you feel this beach is from you?

	1	2	3	4	5	6	7	8	9	10	
Very near	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very far

Attitude towards the destination (Dependent Variable)

Q3 Given the advertisement above, please indicate your opinions about the **ECHUCA beach itself**.

	1	2	3	4	5	6	7	
This manor house is a bad one	☐	☐	☐	☐	☐	☐	☐	This manor house is a good one

I do not like this manor house	☐	☐	☐	☐	☐	☐	☐	I like this manor house
My opinion on this manor house is negative	☐	☐	☐	☐	☐	☐	☐	My opinion on this manor house is positive

Intention to visit (Dependent Variable)

Q4 How likely is that you will visit ECHUCA beach?

	1	2	3	4	5	6	7	8	9	10	
Highly unlikely	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Highly likely

Demographics, Involvement, and Familiarity

(Control Variables)

Gender

Q5 Your gender:

- ☐ Male (1)
- ☐ Female (2)
- ☐ Not specified (3)

Age

Q6 Your age:

- ☐ Under 18 (1)
- ☐ 18 - 24 (2)
- ☐ 25 - 34 (3)
- ☐ 35 - 44 (4)
- ☐ 45 - 54 (5)
- ☐ 55 - 64 (6)
- ☐ 65 - 74 (7)
- ☐ 75 - 84 (8)

- ☐ 85 or older (9)
- ☐ Prefer not to say (10)

Marital Status

Q7 Your marital status:

- ☐ Married (1)
- ☐ Widowed (2)
- ☐ Divorced (3)
- ☐ Separated (4)
- ☐ Single (5)
- ☐ Prefer not to say (6)

Involvement

Q8 To you, a beach is:

	1	2	3	4	5	6	7	
Unimportant	☐	☐	☐	☐	☐	☐	☐	Important
Irrelevant	☐	☐	☐	☐	☐	☐	☐	Relevant
Means nothing	☐	☐	☐	☐	☐	☐	☐	Means a lot to me
Worthless	☐	☐	☐	☐	☐	☐	☐	Valuable
Boring	☐	☐	☐	☐	☐	☐	☐	Interesting
Unexciting	☐	☐	☐	☐	☐	☐	☐	Exciting
Unappealing	☐	☐	☐	☐	☐	☐	☐	Appealing
Mundane	☐	☐	☐	☐	☐	☐	☐	Fascinating
Not needed	☐	☐	☐	☐	☐	☐	☐	Needed
Uninvolving	☐	☐	☐	☐	☐	☐	☐	Involving

Familiarity

Q9 How familiar are you with a beath called ECHUCA?

	1	2	3	4	5	6	7	8	9	10	
Not at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very much

Q10 How much do you know about ECHUCA beach?

	1	2	3	4	5	6	7	8	9	10	
Not at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very much

Q11 How often do you think about ECHUCA beach?

	1	2	3	4	5	6	7	8	9	10	
No at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very much

Appendix G: Sample questionnaire of Study 4 (b)

Example Questionnaire

Cover Story

Imagine that you are planning a vacation trip. When searching tourist information online, you come across this advertisement promoting tourist attractions.

Get inspiration for your next trip!

Vertical Position and Situational Spatial Distance Stimuli

Either one from Figure 32 will be presented to the participants randomly.

Figure 32: Experimental materials to manipulate vertical positions and spatial distance (Study 4 (b))

		Spatial distance	
		Near destination	**Distant destination**
Perceived height	**Low vertical position**	 Explore Manor House in Brighton **(a)**	 Explore Manor House in The Czech Republic **(b)**

	High vertical position	 **(c)**	 **(d)**

Vertical position (Manipulation Check)

Q1 When watching this photo, how high this picture makes you feel?

	1	2	3	4	5	6	7	8	9	10	
Very low	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very high

Spatial distance (Manipulation Check)

Q2 Geographically, how far away do you feel this Manor House is from you?

	1	2	3	4	5	6	7	8	9	10	
Very near	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very far

Attitude towards the destination (Dependent Variable)

Q3 Given the advertisement above, please indicate your opinions about the **Manor House itself**.

	1	2	3	4	5	6	7	
This manor house is a bad one	☐	☐	☐	☐	☐	☐	☐	This manor house is a good one

I do not like this manor house	☐	☐	☐	☐	☐	☐	☐	I like this manor house
My opinion on this manor house is negative	☐	☐	☐	☐	☐	☐	☐	My opinion on this manor house is positive

Intention to visit (Dependent Variable)

Q4 How likely is that you will visit this Manor House?

	1	2	3	4	5	6	7	8	9	10	
Highly unlikely	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Highly likely

Demographics, Involvement, and Familiarity

(Control Variables)

Gender

Q5 Your gender:

- ☐ Male (1)
- ☐ Female (2)
- ☐ Not specified (3)

Age

Q6 Your age:

- ☐ Under 18 (1)
- ☐ 18 - 24 (2)
- ☐ 25 - 34 (3)
- ☐ 35 - 44 (4)
- ☐ 45 - 54 (5)
- ☐ 55 - 64 (6)
- ☐ 65 - 74 (7)
- ☐ 75 - 84 (8)

☐ 85 or older (9)
☐ Prefer not to say (10)

Marital Status

Q7 Your marital status:

☐ Married (1)
☐ Widowed (2)
☐ Divorced (3)
☐ Separated (4)
☐ Single (5)
☐ Prefer not to say (6)

Involvement

Q8 To you, a manor house is:

	1	2	3	4	5	6	7	
Unimportant	☐	☐	☐	☐	☐	☐	☐	Important
Irrelevant	☐	☐	☐	☐	☐	☐	☐	Relevant
Means nothing	☐	☐	☐	☐	☐	☐	☐	Means a lot to me
Worthless	☐	☐	☐	☐	☐	☐	☐	Valuable
Boring	☐	☐	☐	☐	☐	☐	☐	Interesting
Unexciting	☐	☐	☐	☐	☐	☐	☐	Exciting
Unappealing	☐	☐	☐	☐	☐	☐	☐	Appealing
Mundane	☐	☐	☐	☐	☐	☐	☐	Fascinating
Not needed	☐	☐	☐	☐	☐	☐	☐	Needed
Uninvolving	☐	☐	☐	☐	☐	☐	☐	Involving

Familiarity

Q9 How familiar are you with Brighton?

	1	2	3	4	5	6	7	8	9	10	
Not at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very much

Q10 How much do you know about Brighton?

	1	2	3	4	5	6	7	8	9	10	
Not at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very much

Q11 How often do you think about Brighton?

	1	2	3	4	5	6	7	8	9	10	
No at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very much

Q12 How familiar are you with the Czech Republic?

	1	2	3	4	5	6	7	8	9	10	
Not at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very much

Q13 How much do you know the Czech Republic?

	1	2	3	4	5	6	7	8	9	10	
Not at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very much

Q14 How often do you think about the Czech Republic?

	1	2	3	4	5	6	7	8	9	10	
No at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very much