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How Visual Communication Strategies, Brand Familiarity, And Personal Relevance Influence Instagram Users' Responses To Brand Content

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HOW VISUAL COMMUNICATION STRATEGIES, BRAND FAMILIARITY, AND
PERSONAL RELEVANCE INFLUENCE INSTAGRAM USERS' RESPONSES TO
BRAND CONTENT

by

Lijie Zhou

A Dissertation
Submitted to the Graduate School,
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ABSTRACT

HOW VISUAL COMMUNICATION STRATEGIES, BRAND FAMILIARITY, AND PERSONAL RELEVANCE INFLUENCE INSTAGRAM USERS' RESPONSES TO BRAND CONTENT

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This study comprehensively investigated the effects of visual themes, visual perspective, personal relevance, and brand familiarity on brand constructions (attitude-toward-brand, brand love, brand respect, and three dimensions of brand image) on Instagram. The study consists of two parts. In Study 1, the main and interaction effects of visual design elements on individuals' visual attentions, brand recognition, and attitude toward brands were examined by using a 4 (visual theme: customer-centric, employee-centric, product-centric, and non-branded) \times 2 (view perspective: first-person view vs. third-person view) between-subject eye-tracking test. In Study 2, a 4 (visual theme: customer-centric, employee-centric, non-brand, and product-centric) \times 2 (brand familiarity: familiar vs. unfamiliar) \times 2 (view perspective: first-person view vs. third-person view) \times 2 (personal relevance: high vs. low) mixed between- and within-factorial design was used to test the influences of visual and intellectual content on participants' reactions to brand constructions on Instagram. The roles of two moderators, personal relevance and brand familiarity, were also tested.

Results in Study 1 showed that, overall, participants spent the longest time viewing and paid the most visual attention to Instagram posts with customer-centric images from a first-person perspective. In terms of pictures using the third-person view,

posts with product-centric images received the longest fixation duration and the most fixation frequency. Moreover, participants' brand recognition performances were positively influenced by fixation frequency but not by total fixation duration. Findings from Study 2 indicated that high relevance Instagram posts with the first-person angle and customer-centric images to promote a familiar brand received the most favorable attitude, strongest brand respect, and strongest feeling of sensuality toward the brand in all experimental conditions. Limitations and future directions in visual branding on Instagram were also discussed.

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LIST OF ABBREVIATIONS

<i>AOI</i>	Areas of Interests
<i>ELM</i>	Elaboration Likelihood Model
<i>UGC</i>	User-generated Content

CHAPTER I INTRODUCTION

Branding or brand construction on social and other interactive media has been catching strategic communicators' attention rapidly and continuously in the modern marketplace. With such a two-way symmetrical communication platform, consumers are not only interested in the functions, price, and location of a specific product, they also pay much more attention to the story, personality, and lifestyle behind a brand (Belch & Belch, 2012). Beyond information dissemination, the rise of multimedia storytelling campaigns on social media has led to a revolution of brand design and brand recognition. Not surprisingly, more than 80 percent of B2B marketers in North America have their own social media page and use social media as one of their branding tools. About 68 percent of small and medium size enterprises (SME) have profiles on various social networking sites. The worldwide investment of social media branding has increased from \$16 billion in 2014 to \$31 billion in 2016. Only in the United States, \$9.4 billion were spent on social media branding in 2015. Americans visit branded social media pages at a rate of 58.6 percent of the American population, three times per day (The Statistics Portal, 2017).

With the development of visual technology (e.g., high pixel density, 5K display, and P3 color system) and advantages of visual communication (e.g., high speed of information process, editing and viewing friendly, and less persuasive stress), branding strategy on new media, especially social media, has become more visual (Salzer-Morling & Strannegard, 2004; Schroeder, 2004). Visual branding has been dominating brand advertising and campaigns on social media (McQuarrie & Phillips 2008; Phillips, McQuarrie, & Griffin, 2014).

In terms of media functionality and user motivations, there have been two main types of social media: relation-based and visual-based. According to previous uses and gratification studies (e.g., Chen, 2011; Krause, North, & Heritage, 2014; Kaye, 2010; Smock, Ellison, Lampe, & Wohn, 2011; Whiting & Williams, 2013), the use of relation-based social media is primarily to build and maintain interpersonal relationships and connections with other users such as Facebook for loneliness avoidance and surveillance (Chen, 2011; Krause, North, & Heritage, 2014), LinkedIn for professional information and career connection (Smock, Ellison, Lampe, & Wohn, 2011), and Yelp for advisement and reservation (Kaye, 2010; Whiting & Williams, 2013). In comparison, visual-based social media are more about self-expression, visual representation, multimedia storytelling, visual documentation, and coolness such as Instagram's "Selfies" and Pinterest's "Pins" (e.g., Sheldon & Bryant, 2015; Mull & Lee, 2014; Highfield, 2015). In a sense, visual-based social media should be more appropriate to create a unique brand image and share visual stories of a brand. However, traditional relation-based social media such as Facebook (99%) and Twitter (97%) are still the dominant branding platforms used by strategic communicators. Since most marketers lack of visual communication and design experience, they tend to copy their Facebook or Twitter ads to their Instagram and Pinterest pages without adding additional visual elements or using any visual communication strategies.

In the academic world, scholars in psychophysiology have consistently reported that the human brain processes visual stimuli via visual and intellectual channels interactively and synchronously (Arntson, 2012). The persuasive result of a visual message relies on the comprehensive and integral effects of both units, each of which can

either reinforce or weaken the other. However, scholarly examination of visual branding effects has focused on only one of these two units separately. On one hand, researchers in visual communication and graphic design have typically used experiments to manipulate one or more visual elements such as color, shape, or view perspective, then observed the change of branding effects caused by such manipulated variables (Burmam, Hegner, & Riley, 2009). For example, visual themes (Mallick, Ritzman, & Sinha, 2013; Simon, Van-Dendriest, & Wilms, 2016), view perspectives (Bateman, Doucette, Xiao, Gutwin, Mandryk, & Cockburn, 2011; Rouse III, 1999), colors (Lichtle, 2007; Meyers-Levy & Peracchio, 1995; Moore, Stammerjohan, & Coulter, 2004), and camera angles (Lester, 2014) all impact individuals' brand interest, attitude toward brand, visual attention, and brand memory.

On the other hand, media and advertising scholars showed their clear preferences of exploring the influence of symbolic meaning and representation behind visual branding on brand constructions (Cho, Fiore, & Russell, 2015; De Klerk & Lubbe, 2008; Okonkwo, 2007). Examples in such research include the mediating and moderating roles of personal relevance (Baker, 1999; Shiue & Li, 2013), brand familiarity (Mikhailitchenko, Javalgi, Mikhailitchenko, & Laroche, 2009; Simoes & Agante, 2014; Srivastava & Kamdar, 2009), and the use of typography (McCarthy & Mothersbaugh, 2002) on the effects of various branding strategies and consumer behaviors.

Although numerous variables from visual and intellectual units have been identified in previous studies, little research has been done to comprehensively and collaboratively examine how to combine these visual and intellectual elements to achieve desired brand constructions. Moreover, despite the fact that each type of social media

platform has its own functional and motivational emphases, numerous researchers have considered social media as a single media platform and simply extrapolated conclusions based on findings from studies of Facebook or Twitter and presumed them representative of all types of social media. It is necessary to investigate the visual branding strategies specifically on a visual-based social network site such as Instagram.

In terms of methodology, traditional between-, within-, or mix- factorial experimental designs were frequently used to manipulate one or more branding or visual elements such as visual themes, use of text, personal relevance and involvement, and brand familiarity (e.g., Burmann, Hegner, & Riley. 2009; McCarthy & Mothersbaugh 2002; Phillips, McQuarrie, & Griffin, 2014; DeRosia 2008; Doyle & Bottomley, 2006; Henderson, Geise, & Cote 2004). Such a questionnaire-based and self-reported approach is reasonable for testing people's psychological reactions such as interest, intention, feeling, and decisions. However, this research method has its innate limitations on measuring individuals' physiological reactions such as attention, memory recall, attitude, and awareness. For example, the most common way to measure visual attention is to ask participants "to what extent do you pay attention to the ad?" (Molosavljevic, & Cerf, 2008). The self-report from participants is unreliable as it may lack elements of visual awareness and stimuli memory (Lee & Ahn, 2012).

In a quest for more reliability and validity, researchers have attempted to use physical devices to track individuals' physiological reactions instead of relying on self-reporting. By monitoring viewers' fixation duration and frequency, time and location of first fixation, eye movement, and eye direction, eye-tracking analysis is able to detect viewers' visual attention, shifts in attention, and memory recall to stimulus (Deubel &

Schneider, 1996; Wedel & Pieters, 2006; Krugman, 1965; Lee & Ahn, 2012). In the professional world, eye-tracking analysis are also widely adopted for gathering marketing information, finalizing visual design, and testing advertising effects. According to the report from *The New York Times*, several media data collection companies such as TVision, Symphony, RealityMine and Vizio have started to use eye-tracker devices to measure media users' level of attention to certain parts of a given show, visual programs, and ads on traditional TV sets, tablet, phone, Xbox, Wii, Apple TV, and Google Chromecast (Maheshwari, 2017).

The purpose of the current study is to provide a more specific and complete visual branding process on the most popular visual-based social network site, Instagram. Based on the interaction between visual and intellectual units in the human brain when processing a visual stimulus, two studies were conducted for examining the effects of visual communication strategies, brand familiarity, and personal relevance on viewers' visual attention, brand recognition, attitude toward brand, and brand constructions in Instagram.

In Study 1, an eye-tracking experiment was conducted to test the causal relationships between visual units and viewers' physiological reactions. Specifically, using Aaker's (1996) brand identity planning model as the theoretical framework, four visual themes (customer-centric, employee-centric, product-centric, and non-branded) were developed and interacted with two perspective views (first- and third- person views). The researcher tested whether the combination of different visual themes and view perspectives could cause the change of viewers' visual attention (fixation during and fixation frequency) on branded Instagram posts. According to mere exposure effect,

the correlation between visual attention and brand recognition and attitude toward brand were also examined in Study 1.

In Study 2, a mixed between- and within-factorial experiment was used to explore how intellectual units collaborate with visual units on brand constructions on Instagram. Adding two situations, brand familiarity and personal relevance, Study 2 was intended to investigate the main and interactive effects of visual and intellectual units on brand image (mystery, sensuality, and intimacy), brand love, and brand respect. Study 2 focused additionally on the moderating effects of brand familiarity and personal relevance on the influence of visual communication strategy on brand constructions.

Theoretically, this study is an extended application of Aaker's (1996) brand identity planning model on visual branding in new media and makes a visual communication connection between Roberts's (2005) three dimensions of brand image and brandlove model. Practically, if the use of visual communication strategies leads to more positive effects on brand construction in visual-based social media, then by understanding how optical elements stimulate visual branding processing in consumers, strategic communicators will be able to improve their visual branding and information designing skills on new media.

CHAPTER II REVIEW OF LITERATURE

Uses and Gratifications Theory and Social Media

Generally, uses and gratifications theory (U&G theory) suggests individuals are active media users and able to choose and use media based on their motivations and needs (Wu, Wang, & Tsai, 2010). For understanding why people watch TV, McQuail, Blumler, and Brown (1972) developed several motivations including diversion, personal relationship, personal, and surveillance. Not surprisingly, these categories have been changed based on the emergence of various media platforms and communication technologies (Sheldon & Bryant, 2016).

Scholars have added, removed, and modified the gratifications to explain the reasons for people using social media. The motivations and media functions are still the keys for choosing and using different types of social media. For example, people use relationship-based social media like Facebook, LinkedIn, and Twitter for making and maintaining connections (Chen, 2011; Smock, Ellison, Lampe, & Wohn, 2011), entertainment (Sheldon, 2008), and escaping from loneliness (Krause, North, & Heritage, 2014). Moreover, some information-based social media platforms such as Yelp and blogs are used for gathering information (Hicks et al., 2012), getting advice (Whiting & Williams, 2013), and booking services (Kaye, 2010).

Most importantly, the gratifications of using visual-based social media mainly emphasize self-expressions and visual representations (Sheldon & Bryant, 2016). By conducting descriptive analysis and exploratory factor analysis, Mull and Lee (2014) developed five motivations of using Pinterest, which included “fashion, entertainment, creative projects, virtual exploration, and organization.” Specifically, fashion was the

most important reason for using Pinterest to share lifestyles and shopping experiences. Pinterest users' derive gratification from the fact they find the experience on the site enjoyable, easy to comprehend, and simple to navigate. Creative project, a new category in U&G literature, has added the elements of crafts and do-it-yourself projects, both of which are ubiquitous on Pinterest. Similar to McQuail et al.'s (1972) motivation of information, people use Pinterest to explore and learn new things. Sheldon and Bryant (2016) called such motivation in Pinterest as virtual exploration. People also used Pinterest for getting virtual space to organize their visuals (videos and images).

Instagram is a "mobile photo-sharing" and "video-sharing" social network site (Sheldon & Bryant, 2016). As Marcus (2015) indicated, the use of Instagram for individuals is more about showing personal identity rather than building and confirming relational identity compared to the use of Facebook. The rise of "selfies" – the most popular type of Instagram posts, which allows users to post self-portraits taken by a webcam or smartphone – is strong evidence of just how much people have migrated toward visual self-promotion on Instagram. After coding 1,870 Instagram images about a Eurovision contest (an annual singing competition among people from the European Broadcasting Union), Highfield (2015) found that although people updated Twitter posts more frequently than Instagram images, Instagram content contained more personal and lifestyle subjects such as friends, home, and houses. In light of the limited number of Instagram studies, Sheldon and Bryant (2016) indicated surveillance about others, documentation, coolness, and creativity are the motivations for individuals when using Instagram. In these four items, documentation and coolness are the two unique motivations that most closely related to the functions and characteristics of Instagram. To

be more specific, many Instagram users choose to document their personal lives in a combination of pictures and texts. Instagram allows users to add a caption underneath the image as well. In addition, some self-promoted features such as picture filter, trending tag, and explore post are considered to be cool and creative by the users. These special functions of Instagram positively affect individual's self-esteem and self-worth (Baumeister & Leary, 1995).

Visual Branding on Instagram: Brand Identity Planning Model

The aforementioned characteristics and motivations of using Instagram from previous studies – visual-based media, self-expression, lifestyle documentation, surveillance about others, coolness, and creativity – all focused on the personal use of Instagram, but researchers have ignored the powerful strength of using Instagram by organizations in the form of visual branding. In other words, Instagram, as a visual-based social media platform, can be used not only by individuals to self-express their personal identity, but also by organizations to construct and show their unique brand identities visually and strategically. Aaker (1996) defined brand identity as “a unique set of brand associations that the brand strategist aspires to create or maintain” and emphasized “these associations represent what the brand stands for and imply a promise to customers from the organization” (p.68). In his brand identity-planning model, brand was considered as product, as organization, as person, and as symbol. Such a way of identifying a brand helps “establish a relationship between the brand and the customer by generating a value proposition involving functional, emotional or self-expressive benefits” (Aaker, 1996; p.68).

The brand-as-product perspective involves:

(a) product scope—brand can be recalled by classifying its products, (b) product-related attribution—the product offers extra and better features or services for customer’s functional and emotional benefits, (c) quality/value—the product has the highest quality with reasonable price for winning the marketing competitions, (d) associations with use occasion—the products have strong connections with certain job careers and reflect concerns to employee, (e) associations with users—the products serve certain groups of people, and (f) link to a country or region—the products have a national or regional representation (Aaker, 1996, p.80).

Related to visual branding on new media, product-centric image of brands’ Instagram page is a visual version of Aaker’s (1996) brand-as-product perspective for showing current products, introducing upcoming products, creating uses of products, and placing the product in the wild. Using A&W’s safe foods campaign on Instagram as an example, A&W posted a series of high-definition and large-size images of their burgers with sharp details and extreme close-up camera angles on their Instagram page to prove they are the “first national burger restaurant to serve beef, chicken, and eggs raised without hormones or steroids” (A&W, 2017). The brand-as-organization perspective focuses on:

... attributes of the organization rather than those of the product or service. Such organizational attributes as innovation, a drive for quality, and concern for the environment are created by the people, culture, values, and programs of the company (Aaker, 1996, p.82).

Compared with the view of brand-as-product, the brand-as-organization perspective is a long-term and stable attribution of brand identity. Aaker (1996) explained that organizational attributes focused on “unique people, values, and programs” (p.83) and are

more difficult to be copied by other competitors. Also, building organizational attribution for a brand is based on a wide range of product classes. Therefore, it is harder for companies that specialize in a single class of products to compete with those companies that market multiple products under a single banner. Moreover, since the organizational attribution of a brand pays more attention to building an overall and abstract brand image, it is hard to evaluate and compare brands. Showing post-purchase moments, technology innovation, core value, and fan love, the customer-centric images demonstrate the way to build a brand around visual-based media. For example, Bloom & Wild, flower delivery, launched an advertising campaign on Instagram (#BloomandWild) to encourage their followers to share and vote for the best visual stories using Bloom & Wild services. Using this campaign, Bloom & Wild garnered more publicity and increased their sales by 62% (Thomas, 2017).

The brand-as-person perspective suggests, “a brand like a person can be perceived as being upscale, competent, impressive, trustworthy, fun, active, humorous, casual, formal, youthful, or intellectual” (Aaker, 1996, p.83). As Aaker (1996) indicated, brand personality can be a self-expression vehicle that allows individuals to show their own personalities. The brand personality is also a “basis of friendship” between brand and customers. In addition, the characteristics of a specific product can be easily recognized under the well-established brand personalities. In terms of visual branding, the employee-centric and customer-centric images were frequently posted on visual-based media in order to construct the positive and unique brand personalities strategically and visually. It is also the reason why the pictures of lifestyle, employee activity, brand ambassador, and customer “selfies” become more popular on visual-based social networks. Collaborating

with the Prince's Trust (a charity in the United Kingdom), Samsung's "#StandTall" campaign was designed to award the achievements of young people who have creatively and positively impacted their local communities. Through posting photos, mostly selfies of participants on Instagram, Samsung successfully showed its youthful and intellectual personality and generated 681,217 impressions with 7% engagement rate (Thomas, 2017)

The brand-as-symbol perspective means using a unique sign to represent the brand. Aaker (1996) suggested "a strong symbol can provide cohesion and structure to an identity and make it much easier to gain recognition and recall" (p. 84). Although everything can be a symbol, Aaker (1996) highlighted three types of symbols in his model. Visual imagery makes the symbol of a brand more memorable and powerful such as Nike's check mark, McDonald's golden arches, Disney's Cinderella Castle, Coca Cola's red, and Michelin Tire's Michelin man (Thomas, 2017). Since the connection between these visual elements and brands have been established over years, it takes only a glance at the symbols for people to remember the brands these symbols represent. A functional, emotional, or self-expressive metaphor also can reinforce the symbolic meaning of a brand identity. For instance, "the Prudential rock is a metaphor for strength, Allstate's good hands for reliable, caring service, the Pillsbury Doughboy's soft tummy for freshness. Michael Jordan's leaping ability for the performance of a Nike, and the Energizer bunny for long battery life" (Aaker, 1996, p.85). Related to the visual representation and branding, the main purpose of non-branded images (e.g., behind the scenes shots, abstract shots, and storytelling shots) shown on visual media is to cultivate a brand culture and create a symbolic identity of a brand. Sharing videos on Instagram of good Samaritans helping their neighbors to shovel snow off of driveways, Canadian

Tire's "#ShovelitFoward" campaign made people associate and remember that company's "red triangle" with kindness (Keyhole, 2015).

No matter the motivation or approach, an organization's main goal is to build and maintain a value-based brand-customer relationship. In Aaker's (1996) Brand Identity Planning Model, such a relationship requires "treating customers with respect and as a friend" (p.103). A number of researchers have repeatedly found that social media, compared with traditional media, have abilities to make brand-customer relationships more friendly and interactive (Kabadayi & Price, 2014; Kim & Ko, 2012; Rauschnabel, Praxmarer, & Ivens, 2012) by building strong fan communities (Bagozzi & Dholakia, 2006), brand royalty (Kim, Lee, & Hiemstra, 2004) and positive word of mouth (Dholakia & Durham, 2010). Considering the design of media content, social media allows organizations to post informative and detailed updates more frequently and a lower cost than any other media (Bondad-Brown, Rice, & Pearce, 2012). Multimedia storytelling and user-generated content (UGC) like hashtag campaigns make the social media branding become more entertaining (Johnson & Yang, 2009; Quan-Haase & Young, 2010; Whiting & Williams, 2013; Zhao & Rosson, 2009), socially interactive (Pai & Arnott, 2013; Zhao & Rosson, 2009) and self-expressive (Aaker, 1997; Escalas & Bettman, 2003). The revolution of media function and branded content make social media branding more popular and diverse. In practice, "during 2011, 50% of social media users are connected to brands, 42% had a conversation with a brand on social media, and 36% posted content about a brand or a company on social media" (Gao & Feng, 2016, p.868).

Compared with information- and fact-heavy social media and blog articles, the rise of visual content on social media leads the social media branding to a visual era. As Wishpond indicates:

90% of information transmitted to the brain is visual. Visuals are processed 60,000 times faster in the brain than text. Social media-ready and friendly visual content is easily sharable and easily palatable. Businesses who market with infographics grow in traffic an average of 12% more than those who don't. Posts with visuals receive 94% more page visits and engagement than those without. Moreover, 60% of consumers are more likely to click on a business whose images appear in search results. (2014)

Beyond these statistics, visual communication professionals have found visual branding presents products quickly and directly without too much persuasive stress. With users friendly photo editing tools, a well-designed visual representation of brand can easily stand out and immediately catch viewers' attentions among overwhelming online posts.

Jordan suggests:

... photo-based social media sites such as Instagram and Pinterest, in particular, have ushered in a visual revolution, taking the old adage 'don't tell when you can show' to new heights. Unlike words, photos can preserve visual memories when our fade or fail to recount a great vacation from beginning to end. No one takes a vacation without taking photos, right? But beyond sheer memories, a really great photo can influence a purchase decision (2013, p.12).

Early in 2014, according to *Marketing Business Weekly*, 75% of posts on Facebook published by brands were visual (mainly photos); however most brands chose relation-

based social media such as Facebook (99%) and Twitter (97%) as their dominant social media branding platforms rather than use visual-based social networks such as Pinterest (69%) and Instagram (59%).

The Language of Visuals on Digital Media

Language was originally used to describe a verbal system that humans use to communicate with each other in oral or in written form (Barry, 1997). Visual language is a linear system imposed on a nonlinear experience. In visual communication, language is extended beyond the verbal to include construction of signs from visual image. The same as verbal language, the visual language system also has “words”, frames, metaphors, and moods for expressing and understanding the direct and indirect meanings of an image. As Arntson (2012) indicated, there are two unities of communication happen in visual design works. Visual unity refers to the strategic ways to place the visual elements and make it perceptible to the eye (e.g., visual dynamics, visual balance, visual gestalt, and color contrast). Intellectual unity, in contrast, represents the ideology behind visuals and the meaning of words (e.g. symbolic meaning, memory recall, narrative, title, slogan). When human brains process a graphic design work, visual unity will interact with intellectual unity synchronously and generate a comprehensive idea based on the understanding of both these two unities. Therefore, the two unities of a visual design work can reinforce or weaken each other on its persuasive effects. On one hand, Instagram was a social media platform emphasized more about visual self-expression. On the other hand, using different the visual themes and view perspectives could push a visual design work to be either extremely self-centric or extremely objective. It would be interesting to see how, visually, self-related/non-self-related information on Instagram affect individuals’ brand

preferences. Therefore, this study examined the use of visual language for branding on Instagram via both visual unit (visual theme and view perspective) and intellectual unit (brand familiarity and product involvement). The following elements have been mostly used to design visual-based persuasive message on digital media.

Visual Theme

Visual theme has been frequently discussed in previous studies of photojournalism (Entman, 1991; Fahmy & Kim, 2008; Fahmy, 2010) and visual design (Heller & Vienne, 2012). Photojournalists and media scholars analyzed photo themes based on the types of news event and picture subjects (Griffin & Lee, 1995; Schwalbe, 2006; Zeng & Akinro, 2014). Focusing on the visual coverage of the Jos crisis in Nigeria in three newspapers, for example, Zeng and Akinro (2014) categorize the news pictures as politicians, citizens, material destruction, security agents, affiliated representatives, and victims. In the same vein, Zhou and Campbell (2016) indicated the major themes of news pictures from Xinhua, AP, and Kyodo in the coverage of China's 2015 massive military parade are Chinese leaders, Weapons, and Foreign leaders. On the other hand, graphic designers and artists identified visual themes according to art movements and design history (Julier, 1993). During the industrial revolution (19th century), the Art Nouveau and Crafts movements were the two major themes used the most frequently in visual arts and graphic design (Tomes & Armstrong, 2010). Between 1908 and 1933, modernism, which includes cubism, futurism, art deco, surrealism, Dada, the Bauhaus, and constructivism is the dominant visual theme in design industry (Dominiczak, 2012). In the 1970s, postmodernism approaches like retro, techno, punk, grunge, and pastiche were the most common themes used in graphic and visual design (Sparke, 2004).

The aforementioned visual themes have been developed by previous visual communication studies in photojournalism and visual arts, but researchers have yet to define the visual theme of a commercial image according to its persuasive functions and communication strategies. The visual themes in the current study are divided into (a) customer-centric, (b) employee-centric, (c) product-centric, and (d) non-branded in this study according to visual emphases and branding strategies. Strategically, customer-centricity (also known as customer-focus or customer-orientation) is “a strategy that aligns a company’s development and delivery of its products and services with the current and future needs of a select set of customers in order to maximize their long-term financial value to the firm” (Fader, 2012; p. 9). This strategy mainly focuses on customer satisfaction and loyalty (Gebauer & Kowalkowski, 2012). Visually, the theme of customer-centric imagery is the use of photos with customers as the main subject (s). It could be a photo showing a customer using the product, user-submitted “selfies,” or users’ lifestyle images with hashtags (Quentin, 2017). Instead of creating the professional function- or product-based ad images, for example, GoPro’s “This is your life. Be a hero” campaign rewards its users for capturing real-life shots using GoPro (Simon, Vandriest, & Wilms, 2016).

Employee-centric refers to “maintaining employees as a focal point of an organization and seeking to satisfy them” (Sebastian, 2007) and emphasizes employee preferences (Welch, 2011). In terms of visual branding on social media, employee-centric images mainly portray employees as product models in the workspace, individuals with unique characteristics on their birthdays, and team members carrying special brand personalities during team building exercises. For example, “#TBT” (know as

“Throwback Thursday”) encourages users to post photos from the past and reminisce. Similarly, Volkswagen Canada told a visual story about joining team sports with their staff and supporting children’s initiatives on their social media page.

Product-centric business intends to “help build competitive capabilities and sustain competitive advantage throughout the life cycle of a product” and focuses on quality improvement and cost reduction (Mallick, Ritzman, & Sinha, 2013). The product is shot with close-up or extreme close-up angles and usually placed in the area where it can catch the most visual attentions within an image. Such product-centric images are frequently used to introduce the features, appearance, price, and functions of a product (Arntson, 2012). Because of the low cost of social media, Otterbox showed pictures of their smartphone cases with all possible colors on their Instagram page and asked followers “#Which is your favorite?” Showing such a wide array of color images for the same product not only improved the visual appeal, but also increased public engagement. Instagram images titled “EDC edit for this weekend, we can’t wait! #topshopvegas #personalshopping #edc” from Topshop (a British multinational fashion retailer of clothes, shoes, makeup and accessories) teach followers how to select dresses for attending different events by grouping various Topshop products together in the pictures. The pictures and hashtags work interactively and strategically to create an image that Topshop is concerned about each follower.

Unbranded content is a persuasive message that does not link products with specific brands and rarely contains brand colors, slogan, and anything that easily identifies the certain brand (Boykin, 2017). Unbranded content is often used to disclose an issue that can be solved by using a product from the content creator or to start a

goodwill campaign aimed at cultivating brand personality or brand loyalty (Lacoma, 2017). As Stein (2014) indicated, unbranded content may not have immediate sales benefits, but it makes audiences more curious regarding the origin of the message. For example, a YouTube video titled “First Kiss” and produced by Wren (a Los Angeles based women’s wear brand) earned more than 100 million views in the first two months of launching and received significant media attentions from The New York Times, The Guardian, and Harper’s Bazaar. The sales from Wren increased 14,000% in months after the video launched (Stein, 2014).

View Perspective

View perspective reflects the optical angles of the subjects appeared in an image. Based on the camera’s height, view angle, and position, first-person and third-person views have long been used as two levels of view in gaming and graphic studies (e.g., Bateman, Doucette, Xiao, Gutwin, Mandryk, & Cockburn, 2011; Rouse III, 1999; Yu, 2015).

A first-person view places “the camera where the user’s eyes would be in the virtual environment” (Bateman et al., 2011). In other words, in a first-person view, the camera serves as an unseen character’s eyes and tracks what the character sees (Rouse III, 1999). In comparison, a third-person view “moves the camera away from the object of control and often increases the angle of the camera to reduce occlusion” (Bateman et al., 2011). Viewers are able to see the whole landscape as well as the complete image of the character. By changing and rotating the camera view, the first-person and third-person views bring individuals different visual experiences, and affect their visual performances and certain psychological reactions. Focusing on the game player, Rouse III (1999)

believed that the first-person view gave a deeper involvement and made players feel they were saving themselves instead of saving a character.

Pazuchanics (2006) also compared the two views in terms of operator's performance in driving a virtual vehicle and found the first-person perspective caused narrow field of view and difficulty of navigation. In comparison, third-person perspective had a wider field of view and facilitated certain aspects of navigation. Moreover, Salamin, Thalmann, and Vexo's (2006) virtual ball catching experiment showed that first-person perspective had the better training effects on certain actions such as looking down and catching object. On the other hand, third-person perspective is more appropriate for interacting with moving objects since third-person view provided a wider view field and more information to estimate the distances and spaces among moving subjects. Based on the driving performance in a car racing game, Bateman and his colleagues (2011) also supported the argument that both first- and third-person views have strong and weak points. The first-person view showed drivers a larger view of the road, while the third-person perspective provided more visual information about the car's surroundings. Therefore, there was no significant difference on the driving performance between the two view perspectives in racing games. Similar results can be found in Yu's (2014) computer animation learning experiments and Anquetil and Jeannerod's (2007) virtual grasping action experiment.

As discussed above, many studies have been done concerning view perspective and its possible influence on performance in virtual reality tasks, but little research has been conducted in which the persuasive effects of changing view perspectives are examined in relation to strategic programs. This study compares the effects of first- and

third-person view on Instagram images as relates to viewers' visual attention, attitude toward brand, brand recognition, and brand constructions.

Effects of Brand Familiarity on Branding

Brand familiarity is defined as “the brand-related experiences accumulated by the consumer” (Alba & Hutchinson, 1987) and determined by “prior experience and brand exposure” (Sundaram & Webster, 1999). Prior experience can influence the consumer's attitude toward a brand and ability to recognize a brand from among its competitors (Pope & Voges, 2000). Brand exposure derives from the number of a brand appearance and positively relates to the brand recognition and recall (Laroche, Kim, & Zhou, 1996).

Previous studies have repeatedly found the evidence of a positive relationship between brand familiarity and brand recall (e.g., Campbell & Keller, 2003; Kent & Kellaris, 2001). For example, Kent and Kellaris (2001) indicated that a stronger prior brand experience lead to an easier brand recall result in advertising. Based on the elaboration likelihood model, some researchers believed that when familiar brand was appeared on an ad, viewers would make a less effort to process the persuasive information (Keller, 1991; MacKenzie & Spreng, 1992) and the effects of advertising stimulus decreased (Britton & Tesser, 1982). On the other hand, the ad of an unfamiliar brand required viewers to make certain amount of thinking and caused their higher level of elaboration. In such an unfamiliar situation, the power of advertising stimulus would increase (Cacioppo & Petty, 1979). Visually, Mikhailitchenko and his colleagues (2009) supported the previous studies' argument that the effect of visual imagery was more like to recall an unfamiliar brand rather than a familiar brand.

In the view of brand construction, much research examining brand familiarity and brand image suggests that familiar brands, compared with unfamiliar, have completed the first step of brand image building, the establishment of awareness (Srivastava & Kamdar, 2009). Because of the existence of such cognitive image of familiar brand in individual's mind, individuals tended to form a more comprehensive and well-developed brand image (Olson, 1978). In addition, researchers have attempted to prove the strength of familiar brands on brand construction in different perspectives. For example, a familiar brand can be detected and recognized more quickly and easily than an unfamiliar brand in physical environment such as store and advertising clutter (Alba & Hutchinson, 1987; Dahlen, 2001). Familiar brands were not affected by the competing claims as much as an unfamiliar brand was (Kent & Allen, 1994; Pechmann & Stewart, 1990). Instead, familiar brands were powerful and credible sources of claims (Snyder, 1987). As Alden and his colleagues (2000) indicated, strategic communicators should understand how to tell a new story of a familiar brand, since people have well-understood the brand culture for familiar brands which make them to be willing to hear the stories structured based on a certain communication style.

However, other scholars believe that individuals might make more efforts and dedicate more cognitive resources to extensively process the information of an unfamiliar brand than the information from a familiar brand (Carrillat et al., 2005). Compare with familiar brands, the construction of less familiar brands was more flexible and diverse (Carrillat et al., 2005). Therefore, Simoes and Agante (2014) suggest new brand sponsors are more likely to receive greater amount of brand image transference and more purchase intention than the sponsors from familiar brands. Using brand familiarity as an

independent variable and mediator, this study tested the main, interactive, and mediating effects of brand familiarity on brand constructions.

Effects of Personal Relevance on Branding

Personal relevance is “the extent [to which] consumers perceive the object/objective to be self-related or in some way instrumental in achieving their personal goals and values” (Celsi & Olson, 1988). As proven mostly via the Elaboration Likelihood Model (ELM) in previous studies, personal relevance will significantly impact individual’s motivation to process persuasive message (Petty, Brinol, & Priester, 2007), the extent of elaboration (Priester & Petty, 1995), and attitude toward brand (Petty, Brinol, & Priester, 2007), as well as the effect of persuasion in a message with strong or weak arguments (Petty & Cacioppo, 1979). In short, personal relevance is one of the most important predictors for branding effectiveness (Haugtvedt, Petty, & Cacioppo, 1992).

In Petty and Cacioppo’s (1979) experiment, for example, the quality of the arguments (strong vs. weak) in the message about graduate exam policy had a greater impact on students’ attitude when the exam would be taken at their own school rather than at other universities. Therefore, as Petty, Brinol, and Priester found, “when personal relevance of the message increased, strong arguments were more persuasive, but weak arguments were less persuasive than in the low relevance conditions” (2009, p.136). Moreover, when the quality of the argument is high, individuals with high personal relevance generated more than twice as many favorable responses as the individuals with low relevance. On the other hand, when the quality of argument is low, the individuals with high personal relevance generated more than twice as many unfavorable responses

as the individuals with low relevance. Although Petty and Cacioppo's (1979) study based on a physical environment and using radio as their information distribution platform, it emphasized the interactive effect among personal relevance, quality of media content, and persuasive effects.

In addition, personal relevance has been popular as a mediating variable in strategic communication studies. According to ELM, high motivation and ability lead individuals to process a persuasive message via a central route and to carefully review the message with certain amount of thinking (MacInnis, Moorman, & Jaworski, 1991). Contrarily, low motivation and ability lead individuals to process a persuasive message via a peripheral route (Celsi & Olson, 1998; Petty & Cacioppo, 1984). The decision making process will highly rely on peripheral cues like source trustworthiness, media expertise, and information formats (Park, & Lee, 2008; Petty, Brinol, & Priester, 2007). Personal relevance plays a mediating role between an individual's level of elaboration (amount of thinking) and persuasive effects. With a high personal relevance, people are more motivated and make more efforts to understand the information and change or confirm their attitudes, brand interest, and purchase decision (Phelps & Thorson, 1991; Suh & Yi, 2006; Warrington & Shim, 2000). In comparison, low personal relevance often causes the decrease of people's elaboration level and motivation. However, the persuasion may happen due to non-content cues (Kaufman, Stasson, & Hart, 1999).

Despite personal relevance having been identified more as a product design factor, it is also useful in brand constructions (Aaker, 1997; Kirmani, Sood, & Bridges, 1999). According to Aaker's (1996) Brand Identity Planning Model, the degree of consumers' personal relevance to a brand determines if the brand will inspire positive

attitudes and feelings, and if such feelings will reinforce the brand respective. The perceived value of a brand is a significant factor of customer satisfaction (Cronin, Brady, & Hult, 2000). More specifically, individuals give different levels of personal relevance to various brands, which impact their brand satisfaction (Chaudhuri & Holbrook, 2001). The more satisfied the people are, the more positive emotional ties toward the brand, and, finally, the greater brand loyalty and trust people will have. Continuous brand loyalty and trust are the most important elements for establishing and maintaining a successful long-term relationship between brand and customers (Song et al., 2012). In the light of previous research, the current study explored the interaction and mediating effects among quality of visual content (photo theme and view perspective), brand familiarity and personal relevance on brand constructions.

Brand Contractions: Dimensions of Brand Image and the Lovemarks Model

The brand constrictions in this study mainly focused on brand image with three dimensions (mystery, sensuality, and intimacy), as well as brand love and brand respect.

Brand Image

Brand image is a multi-meaning concept that indicates the way a brand appeared in front of the public. Researchers have attempted different ways to conceptualize brand image. In the early stage, brand image has been defined as “messages and meanings associated with the brand, product, and service” (Durgee & Stuart, 1987; Levy & Glick, 1973). Brand image also has been explained as “the total impression of a brand, including thoughts related to product attributes, the use of the product, and advertisement” (Dichter, 1985; Newman, 1957; Snyder & DeBono, 1985). It has been defined as “personification of brand that reflects a consumer’s own self-image” (Hendon & Williams, 1985; Sirgy,

1985) and as “symbolic benefits such as enhanced self-esteem and social status, that come from brand ownership” (Frazer, 1983; Gardner & Levy, 1955; Pohlman & Mudd, 1973).

More recently, marketing researchers added emotional and cognitive dimensions into brand image. As Dobni and Zinkhan (1990) defined, brand image is a reasoned or emotional representation of a brand created by marketing promotions and consumer personalities. Moreover, Keller (1993) introduced sensory dimension to brand image and explained sensory and emotional dimensions associated with product-related attributes. According to Korchia (1999), sensory dimension is one of the three most important elements of fashion brand images. The other two are cognitive and affective associations. Both industrial and academic literature (e.g., Babin, Hardesty, & Suter, 2003; Bone & Jantrania, 1992; Gobe, 2001; Roberts, 2005; Schmitt & Simonson, 1997) made the same conclusion that the cultivating positive sensory dimension is helpful in increasing consumers’ preference for a brand. Positive emotion is a long-term factor for increasing consumer’s passionate feeling about and positive expectations of a brand (Albert et al., 2008; Shimp & Madden, 1988). It is inline with Batra and his colleagues’ (2012) findings that emotion association and intention of using a brand are strong and passively related to the love of the brand. Overall, cognitive, sensory, and affective/emotional associations are the three dimensions were used most frequently to measure brand image and predict individual’s behavioral reactions in previous strategic communication studies. These three dimensions also contribute to the cultivation of love-mark and fan-love of a brand (Roberts, 2005).

For developing a valid and reliable measurement of brand image, Cho, Fiore, and Russell (2014) used mystery, sensuality, and intimacy to represent the cognitive, sensory, and affective dimensions of brand image respectively. Borrowed from Roberts's (2005) three storytelling elements (myths, iconic characters, and dreams), Cho and his colleagues used mystery to represent cognitive dimension of a brand image "shaped by great stories, past and present interactions with a brand, as well as future dreams and aspirations reflecting a certain lifestyle" and developed four primary themes of mystery: (a) positive present experiences; (b) positive memories from past experience, (c) future aspirations, and (d) self-congruity.

Sensuality reflects the multisensory dimension "shaped through a consumer's brand experiences, such as the sensations from the product, retail environment, or ads" (Cho, Fiore, & Russell, 2014). For example, visual sensuality could include "brand display, logo design, and packaging, as well as music, olfactory stimulation, and a variety of textures, foster pleasurable associations" (Roberts, 2005). Four major themes have been discovered in previous studies: (a) visual, (b) olfactory, (c) auditory, and (d) tactile sensations. As Cho and his colleagues indicated:

Visual sensation was more frequently discussed than the other three sensations. This theme represented sensual pleasure evoked by visual cues from branding elements, such as the store environment, Web site design, product color, packaging, and advertisements. (2014, p. 33)

Intimacy emphasizes in interaction with a brand and reflects the affective dimension of brand image. It shapes "responses toward a brand. For example, a firm's understanding of a consumer's opinions and preferences, a consumer's long-term

commitment, and a consumer's enjoyable interactions with a brand may foster positive emotions and perceptions toward it" (Cho, Fiore, & Russell, 2014, p.32). Intimacy contains three major themes:

(a) the firm's empathy –understanding of consumer's preferences, (b) consumer commitment—a long-term friendship, and (c) consumer enjoyment—emotional pleasure from using and interacting with the brand (Cho, Fiore, & Russell, 2014, p.33).

As mentioned above, previous studies have shed light on conceptualizing the brand image with various perspectives. This study used Cho, Fiore, and Russell's (2014) brand image scale to measure brand image with three dimensions (cognitive, sensory, and affective dimensions) and believed mystery, sensuality, and intimacy is appropriate to represent cognitive, sensory, and affective dimensions of brand image.

Brand Love and Brand Respect

Brand love and brand respect are two levels of Roberts' (2005) lovemarks model. In Roberts' perspective, lovemark is defined as "a combination of high brand love and respect that generates loyalty beyond reason" (Roberts, 2005, p. 66). It is consistent with Pawle and Cooper's (2006) findings that a brand with high levels of love and respect resulted a high brand loyalty. Compared to products, fads usually have high level of love but low level of respect, but only brands are possible to have both high levels of love and respect (Roberts, 2005). As Bass (2011) exemplified, long waiting lines and busy pre-orders of Apple's new product are the evidences of Apple's high levels of love and respect. Consumers may not be excited to Dell's products, but they show the royalty to this brand. From this point, Dell represents a brand with low level of love but a high level of respect. The reason for including brand love and brand respect as two perspectives of

brand construction in this study is that brand love and respect reflects the lovemark of a brand, while the three dimensions of a brand image are antecedents of the lovemark (Roberts, 2005). As Cho, Fiore, and Russell (2014) proposed, “both lovemark antecedents and the brand image concept tap into consumers’ rational and emotional perceptions of and associations with a particular brand” (p. 34).

Brand love is defined as “a strong affection or deep emotional attachment consumers have for a certain brand” (Albert et al., 2008; Carroll & Ahuvia, 2006). Therefore, the aforementioned connections show a positive relationship between mystery and brand love. Sensory elements such as color (Valdez & Mehrabian, 1994), music (Dube, Chebat, & Morin, 1995; Yalch & Spangenberg, 2000), and scented products (Bone & Jantrania, 1992; Miller, 1991) are sometimes able to create and promote emotional pleasure and a feeling of love to a brand. Therefore, it supports the notion that sensuality could positively affect brand love (Roberts, 2005). Intimacy is another dimension of brand image and is also a general factor in forming brand love (Sternberg, 1997; Sternberg & Grajek, 1984). Marketing scholars have consistently reported that emotional connection to a brand is a key point in building a love relationship between consumers and brand (e.g., Albert et al., 2008; Batra et al., 2012; Carroll & Ahuvia, 2006; Shimp & Madden, 1988). Such emotional connection leads to an expected subconscious physiological response to a brand (Maxian et al., 2013). Thus, a significant relationship can exist between intimacy and brand love.

Brand respect is “the positive perceptions consumers have toward a particular brand based on their evaluation of brand performance, trust, and reputation” and built through brand performance, trust, and reputation (Roberts, 2005). A number of academic

research and industry reports have found the connection between brand respect and brand image. For the dimension of sensuality, Postrel (2003) hypothesized functional quality and price did not make a brand stand out from its competitors. Postrel believed the aesthetic design of a brand or product could enhance brand reputation and respect. According to the description of respect from Gottman (1996), respect means “being attentive, empathic, sympathetic, kind, and supportive.” Empathy is not only the key point for brand respect, but also a basic element of intimacy, which is one of the three dimensions for brand image (Cho, Fiore, & Russell, 2014). As Shimp and Madden (1988) pointed out, strong positive feeling of intimacy provides a brand image of high quality and value, which enhances brand respect.

Visual Attention, Memory, and Attitude: Mere Exposure Effect

Catching attention is the first step to influencing people’s decision making (Lee & Ahn, 2012). More attention provides more opportunities to encode and decode message (Intraub, 1979). Visual researchers have attempted to examine the relationship among attention, memory, and attitude by conducting eye-tracking analyses (e.g., Goodrich, 2011; Pieters, Warlop, & Wedel, 2002). Focusing on online advertising, Goodrich (2011) found ad type, location, and page had significant effects on the amount of attention to an ad. While attention and ad recall were positively related, attention were negatively related to brand attitude. After testing eye fixations on brand, text, and pictures from original and familiar advertisements, Pieters, Warlop, and Wedel (2002) made a similar argument that the brand memory were positively and directly affected by brand attention on both the two types of advertisement.

The relationship between visual attention and attitude were tested by eye-tracking experiments mainly based on mere exposure effect (Coates, Butler, & Berry, 2006; Goodrich, 2011; Lee, 2002; Shapiro, MacInnis, & Heckler, 1997). Mere exposure effect suggests that “brief and repeated exposure to a stimulus can encourage people to have familiarity and a more favorable attitude toward that stimulus at an unconscious level, that is, even when they cannot recollect being exposed to it” (Lee & Ahn, 2012, p.124). Since mere exposure happens in low-attention and unconscious situations (Heath, Brandt, & Nairn, 2006; Yoo & Kim, 2005), the mere exposure effect should be stronger when an individual does not realize the disclosure (Bornstein, 1989). As such, the level of attention had negative influence on attitude (Goodrich, 2011). A number of studies have proved that mere exposure stimulus, such as short exposure duration, led to more favorable attitudes toward brand, however the longer the exposure was, the less favorable attitude would have (Bornstein & D’Agostino, 1992). In this study, the relation among visual attention, brand recognition, and attitude toward brand were tested by conducting an eye-tracking experiment (Study 1) for measuring individual’s fixation duration and fixation frequency on each Instagram posts created by brands.

CHAPTER III HYPOTHESES AND RESEARCH QUESTIONS

The present study was designed to provide a comprehensive understanding of the effects of visual communication strategies, brand familiarity, and personal relevance on consumers' visual attention, brand attitude, brand recognition, and brand constructs on Instagram. According to the work channels of processing a visual design work in human brain (visual unit and intellectual unit), the current study intended to conduct two experiments, one for investigating individuals' reactions to the visual stimulus (Study 1), the other for examining the persuasive effects of intellectual unit (Study 2). In addition, the moderating roles of brand familiarity and personal relevance were also tested in relationship between visual branding strategies and brand constructions.

Visual Reactions (Study 1)

As mentioned in the literature review, visual themes were discussed frequently by photojournalists (Entman, 1991; Fahmy & Kim, 2008; Fahmy, 2010) and visual artists (Dominiczak, 2012; Julier, 1993; Sparke, 2010; Tomes & Armstrong, 2010) according to the basic visual elements (e.g., color, line, shape, subject, and camera angle), semiotic signs (e.g., iconic sign, index sign, and symbolic sign), and aesthetic ideologies (e.g., Bauhaus, Art deco, Cubism, Dada). With the rise of visual branding on Instagram and other visual-based social media platforms, strategic communicators are using visuals with emphases on visual representations of a brand, persuasive functions, and storytelling values. Based on the industrial reports (Quentin, 2017; Swant, 2015) and the observations of using pictures on various Instagram pages, the author categorized visual themes as (a) customer-centric, (b) employee-centric, (c) product-centric, and (d) non-branded.

Although different visual themes may cause changes in viewers' visual attention, the researcher was not able to locate any previous research that specifically examined the use of visual themes in visual branding on social media. Therefore, the following research question was developed:

RQ1: Do visual themes (customer-centric, employee-centric, product-centric, and non-branded) for branding on Instagram affect individuals' visual attentions as measured via (a) fixation frequency and (b) fixation duration?

In addition, switching view perspectives between first- and third-person views can bring individuals the different visual experiences, and then cause the changes of certain visual performances. According to Reeves and Nass's (1998) media equation model, viewers tended to pay more attention to a main subject with closer visual distance (first-person view) in a picture rather than a subject with longer visual distance (third-person view). Similar results were consistently found in previous studies on virtual reality performance (Pazuchanics, 2006; Rouse III, 1999), gaming (Bateman, Doucette, Xiao, Gutwin, Mandryk, & Cockburn, 2011) and graphic design (Salamin, Thalmann, & Vexo, 2006). Despite the existence of opposing arguments in the literature (e.g. Anquetil & Jeannerod, 2007; Yu, 2014), which maintain that there is no significant differences in visual attention between first- and third-person views, the researcher chose to follow the former perspective due to its higher incidence and precision. Therefore, the following hypothesis was developed:

H1: Compared to the pictures with third-person perspective, the first-person-view pictures used for branding in Instagram will lead to:

(a) more fixation frequency toward the picture;

(b) longer fixation duration toward the picture.

The researcher was also interested in learning if there were any interaction effects between visual themes and view perspectives in terms of viewers' visual attentions to brand pictures on Instagram. The following research question was asked for exploring this relationship:

RQ2: Are there any interaction effects between picture theme and view perspective in terms of individual's visual attention as measured by (a) fixation frequency, and (b) fixation duration?

Based on mere exposure effect, previous eye-tracking studies have repeatedly reported viewers' visual attentions positively associated with their brand memory performance (Goodrich, 2011; Pieters, Warlop, & Wedel, 2002), and negatively related to their attitude toward a brand (Coates, Butler, & Berry, 2006; Gardiner & Richardson-Klavenhn, 2000; Goodrich, 2011; Lee, 2002; Shapiro, MacInnis, & Heckler, 1997). Moreover, researchers have measured brand memory by testing brand recall, cued recall, and brand recognition (Goodrich, 2011; Intraub, 1979; Lee & Ahn, 2012). Among these three, recognition is considered the most sensitive and valid measurement to assess memory (Perfect & Askew, 1994; Shapiro, Macinnis, & Heckler, 1997), especially in low-involvement conditions (Krugman, 2000). Thus, brand recognition was used to test the brand memory in this study. Taken together, the following hypotheses were proposed:

H2a: Participants with more image fixation frequency would display better brand recognition performance.

H2b: Participants with longer image total fixation duration would display to better brand recognition performance.

H3a: Using first-person view image would increase the positive effect of fixation frequency on brand recognition performance.

H3b: Using first-person view image would increase the positive effect of total fixation duration on brand recognition performance.

H4a: Participants with more image fixation frequency would display less favorable attitudes toward the brand.

H4b: Participants with longer image fixation duration would display less favorable attitudes toward the brand.

Intellectual Reactions (Study 2)

People are using Instagram for self-expression, lifestyle documentation, coolness, and visual creativity (Sheldon & Bryant, 2016) rather than building and maintaining interpersonal relationship on a relationship-based social networks such as Facebook, Twitter, and LinkedIn (Smock, Ellison, Lampe, & Wohn, 2011; Chen, 2011). Beyond a personal use, such a visual-based social media provides a low/zero-cost and multimedia storytelling platform to post unique visual stories of a brand. Although there is no direct evidence from previous studies to support a correlation between visual themes and brand constructions, Aaker (1996), in his brand identity planning model, emphasized a strong brand image is able to be described as product, as organization, person, and symbol synchronously. Thus, the following research question was proposed:

RQ3: Do visual themes (customer-centric, employee-centric, product-centric, and non-branded) affect (a) brand image (mystery, sensuality, and intimacy), (b) brand love, and (c) brand respect in Instagram?

Moreover, intimacy and sensuality are two of the three major dimensions of a brand image (Cho, Fiore, & Russell, 2015; Keller, 1993). As mentioned before, the three dimensions of brand image, brand love, and brand respect are highly and positively related to each other (Roberts, 2005). The previous virtual and design studies have found that alteration of viewer perspectives could cause the changes of both psychological and visual distances between viewers and subjects in visuals (Bateman, Doucette, Xiao, Gutwin, Mandryk, & Cockburn, 2011; Rouse III, 1999; Yu, 2015). In Reeves and Nass's (1998) media equation model, the short distance increased in the feelings of intimacy and sensuality. Based on the literature review, the following hypothesis was developed:

H4: Compared to pictures with third-person perspective, the first-person-view pictures used for branding on Instagram would lead to:

- (a) more positive brand image (mystery, sensuality, and intimacy);
- (b) stronger brand love;
- (c) more brand respect.

Taking the two parts of visual communication strategies together, the current study also considered the interactive relationship among visual theme, view perspective, and use of text. The following research question was developed:

RQ5: Are there any interaction effects between picture theme and view perspective in terms of (a) brand image (mystery, sensuality, and intimacy), (b) brand love, and (c) brand respect in Instagram?

Personal relevance and brand familiarity have been traditional variables in numerous advertising studies, where they have been used as moderators contributing to brand constructions and consumer behaviors (e.g., Campbell & Keller, 2003; Celsi and

Olson, 1988; Kent & Kellaris, 2001; Petty, Brinol, & Priester, 2009). Based on ELM, personal relevance and brand familiarity both have significant effects on individuals' product involvement and level of elaboration, and further influence people's attitude toward brand and other persuasive effects (Park, Lee, & Han, 2007; Petty, Cacioppo, & Haugtvedt, 1992). Although the literature does not directly support the moderating effects of visual communication strategies on brand image, brand love, and brand respect, considering the persuasive process and results of ELM in previous research of branding, it was expected that:

H5: Personal relevance moderates the effects of visual communication strategies (visual theme and view perspective) on:

- (a) brand image (mystery, sensuality, and intimacy);
- (b) brand love;
- (c) brand respect.

H6: Brand familiarity moderates the effects of visual communication strategies (visual theme and view perspective) on:

- (a) brand image (mystery, sensuality, and intimacy);
- (b) brand love;
- (c) brand respect.

It was further queried:

RQ6: Does brand familiarity moderate the effects of visual communication strategies in Instagram branding posts for both highly relevant products and less relevant products?

RQ7: Does personal relevance toward brands moderate the effects of visual communication strategies in Instagram branding posts for both familiar and unknown brands?

Overall, the following figures (Figure 1 and Figure2) demonstrate the relations among all research questions and hypotheses in Study 1 and Study 2, respectively.

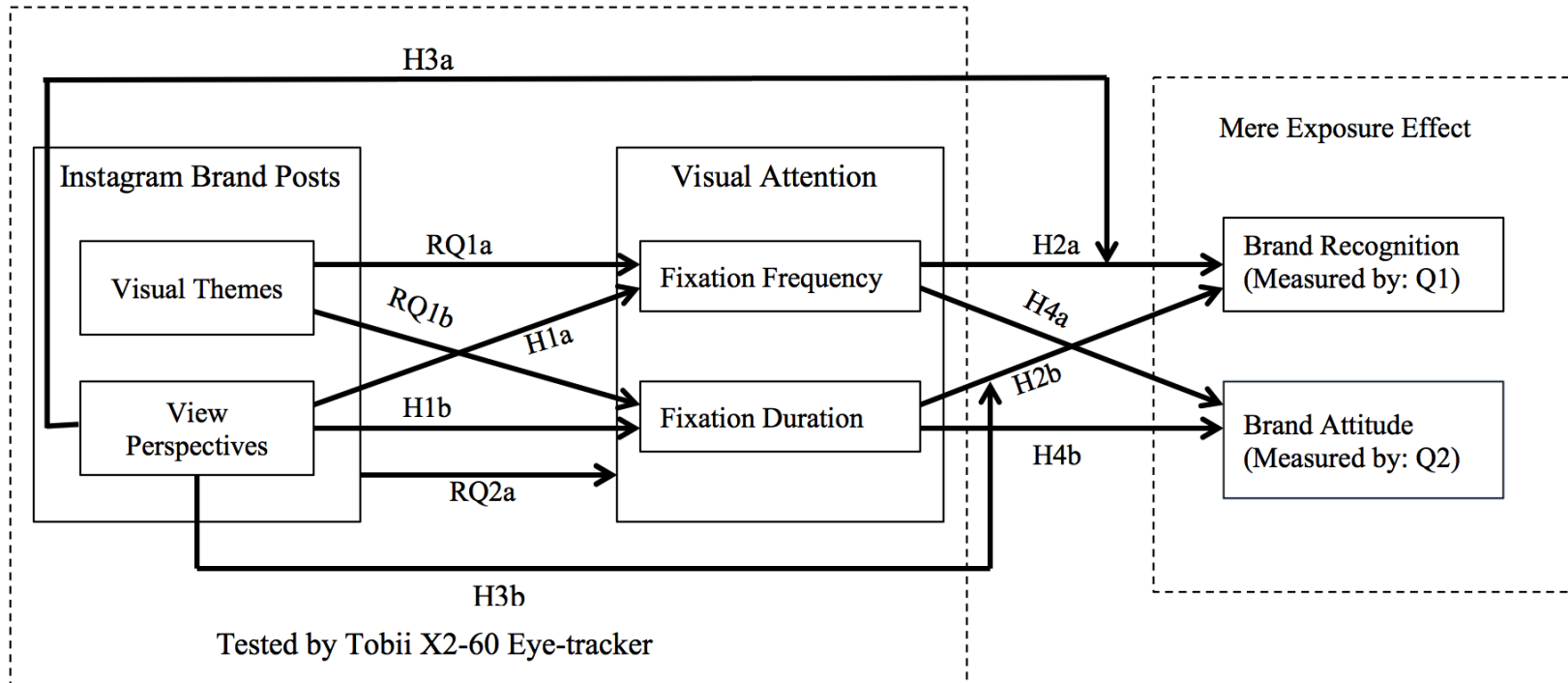


Figure 1. Conceptual model showing the relationship between the independent and dependent variables in Study 1.

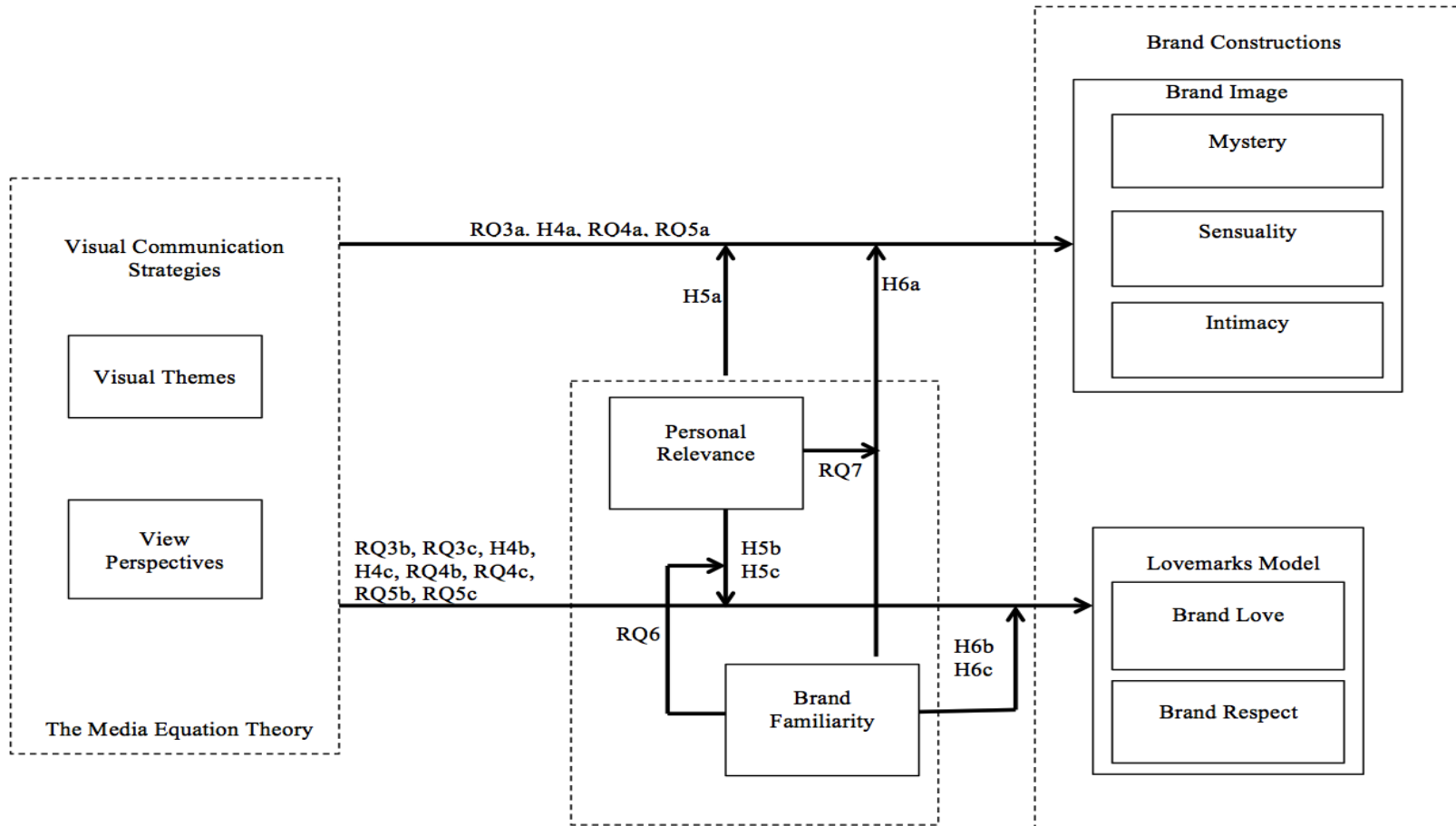


Figure 2. Conceptual model showing the relationship between the independent and dependent variables in Study 2.

CHAPTER IV METHOD

As mentioned early in Literature Review section, the way of processing a visual stimulus in the human brain follows two channels, visual and intellectual. These two channels always work simultaneously and interactively when people view a visual design work. In order to understand the visual branding in Instagram comprehensively, the research must be designed to reflect the working process in both channels.

The main purposes of this study were to (a) explore the effects of visual elements of Instagram brand posts on participants' attentions, brand recognitions, and attitude toward the brand in Study 1 and (b) add two intellectual variables, brand familiarity and personal relevance, and to examine how these two intellectual variables moderated the visual effects on brand constructions in Instagram in Study 2.

Study 1: Eye-tracking Analysis of Visual Units

Experimental Design

A 4 (visual theme: customer-centric, employee-centric, product-centric, and non-branded) \times 2 (view perspective: first-person view vs. third-person view) between-subject factorial design (eye-tracking experiment) was used to explore the effects of visual communication strategy on viewers' visual attention (fixation frequency and fixation duration), attitude toward brand, and brand recognition.

Traditional approaches of measuring attention and memory are either hard memorize or lack an element awareness (Molosavljevic & Cerf, 2008). In comparison, people's physiological reactions such as eye movement, eye direction, and eye fixation are more reliable and accurate reflections of visual attention (Deubel & Schneider, 1996;

Wedel & Pieters, 2007) and memory recall (Krugman, 1965; Vertegaal & Ambler, 1999; Lee & Ahn, 2012) than self-reporting or scale measurement. The current study used the Tobii X2-60 eye-tracker to collect the data of eye movement. During tracking, this device relies on infrared light to produce reflection waves and other visual data based on participants' corneas (Tobii, 2017). These waves and data are recorded on image sensors on the monitor, and then are analyzed by the eye-tracking software (Tobii Studio Pro) to calculate eye position (Djamasbi, Siegel, & Tullis, 2010). In this study, each eye movement within 60 Hz frequency (every 4.15 milliseconds) was collected and recorded. The participants' eye fixation frequency and duration on certain areas were also calculated.

In addition, the Tobii X2-60 is “an unobtrusive eye tracker for detailed research of natural behavior” (Tobii, 2017, p.1). All parts of the device are attached behind or in front of a computer screen, which makes the eye-tracker look more like a normal computer monitor. Moreover, this device does not require participants to wear any extra attachments on their body, which allows the eye-tracking experiment to be conducted in a natural and flexible environment.

Stimuli Development

Fifteen undergraduate students participated in the pretest to identify product categories that were relevant to them. Three product categories (coffee, fast food, and computer) were voted as the most common products for college students. This result is in line with previous studies that suggest food, cosmetics, and electronic devices are the primary product categories related to college life (Lee & Ahn, 2012; Baker, 1999;

Nordhielm, 2002). Based on existing brands (such as Taco bell, Wendy's, Starbucks, and Apple) and their Instagram posts, eight Instagram posts for each product category were created based on various combinations of visual themes and view perspectives. To avoid the impact of brand familiarity, the researcher used fictitious brand names and logos instead of using real brands. To ensure the accuracy and reliability of data analysis, areas with product and brand identifications were highlighted as the areas of interest (AOI) on the visual data analysis software (Tobii Studio Pro).

In Group 1, participants were shown three Instagram posts with first-person view and customer-centric images for a coffee brand named Atomic Coffee, a fast food brand named Decos, and a computer brand named Thunderstorm, respectively. In Group 2, participants were shown Instagram posts from the same brands with first-person view and employee-centric images. In Group 3, Instagram posts from the same brand with first-person view and product-centric images were viewed by participants. In Group 4, participants viewed Instagram posts from the same brands with non-branded image and first-person view. Accordingly, the participants from Groups 5 through 8 viewed Instagram posts from the same three brands with four visual themes and a third-person perspective, respectively. Many previous social media advertising experiments used static screenshots or text-based scenarios as stimulus materials (e.g., Sheldon & Bryant, 2016; Mull & Lee, 2014). In comparison, the Instagram posts used in this study were more interactive and functional, which the researcher believed would help to increase the effectiveness of the measurements.

Participants and Procedure

Undergraduate students at a large southern university in the United States served as subjects in the experiment. The use of a student sample was appropriate because the current study was meant to test if the expected effects appeared, not to serve as representative of a more diverse population (Lang, 1996). The total sample size was 104, including 36 males (35%) and 68 females (65%), age ranged from 18 to 34, with a median age of 26. Each subject was assigned randomly to one of the eight experimental conditions: customer-centric image with first-person perspective (Group 1: n=13), employee-centric image with first-person perspective (Group 2: n=13), product-centric image with first-person perspective (Group 3: n=13), non-branded image with first-person perspective (Group 4: n=13), customer-centric image with third-person perspective (Group 5: n=13), employee-centric image with third-person perspective (Group 6: n=13), product-centric image with third-person perspective (Group 7: n=13), and non-branded image with third-person perspective (Group 8: n=13). The study received Internal Review Board approval and students were recruited in the manner prescribed in the IRB General Guidelines.

Prior to the main experiment, a pretest was conducted with 20 undergraduate students who did not participate in the main study. The goals of the pretest were to select appropriate product categories, finalize stimuli materials and questionnaires, and test the reliability of measurement scales.

In the main test, participants were allowed to go through each Instagram post at their own speed, by clicking the “Next Page” button at the lower-right corner of each

page. Different from putting participants under time constraints, such free viewing conditions provided the maximum flexibility and freedom to ensure each participant's eyes had ample time to travel around every part of a post. Without telling participants during the experiment, attention data (fixation frequency and fixation duration) were collected when the students reviewed each Instagram post. Immediately after viewing each post, participants were asked to answer questions that measured their attitude toward brand and brand recognition, as well as a few demographic questions.

Measures

Visual attention was measured by tabulating fixation duration and fixation frequency with the Tobii X2-60 eye-tracker. This device is able to measure “fixation frequency (i.e., number of eye fixations on target stimuli), fixation duration (i.e., total duration of eye fixation on target stimuli), scan path (fixation sequence), location of the first fixation, time of the first fixation, and so forth” (Lee & Ahn, 2012, p.127). Since the current study focused on the visual attention on specific locations, fixation duration and fixation frequency were considered to be the two most appropriate measurements (Wedel & Pieters, 2006).

Brand recognition was measured to test participants' brand memory. Previous research has measured brand memory by testing brand recall, cued recall, and brand recognition. Among these approaches, brand recognition was used the most frequently (Perfect & Askew, 1994) because of its sensitivity and discrimination (Singh, Rothschild, & Churchill, 1988). In the current study, participants were asked to look at four brands and choose the one they saw from the experiment.

Attitude-toward-a-brand was measured by a 5-item, 7-point semantic differential scale that was developed by Gardiner and Richardson-Klavehn (2000) and Janiszewski (1993). Participants were asked to rate the brand as bad/good, not likable/likable, unpleasant/pleasant, unfavorable/favorable, and unattractive/attractive. The coefficient alpha was .93.

Study 2: Psychological Analysis of Intellectual Units

Experimental Design

A 4 (visual theme: customer-centric, employee-centric, non-brand, and product-centric) \times 2 (brand familiarity: familiar vs. unfamiliar) \times 2 (view perspective: first-person view vs. third-person view) \times 2 (personal relevance: high vs. low) mixed between- and within-factorial design was adopted to explore the effects of visual theme (between factor), brand familiarity (between factor), view perspective (within factor), and personal relevance (within factor) on brand attitude and brand constructions, including brand image (mystery, sensuality, and intimacy), brand love, and brand respect.

Stimuli Development

Twenty-eight undergraduate students participated in the pretest to rate personal relevance to eight selected brands on a 10-item, 7-point semantic differential scale developed by Zaichkowsky (1994). As indicated in Table 1, participants reported the highest brand relevance to Dell (PC and laptop) and lowest brand relevance to Jackson Hewitt (tax return preparation service). Significant differences were found between Dell ($M = 6.31$, $SD = 0.82$) and Jackson Hewitt ($M = 3.36$, $SD = 1.28$), $t(45.94) = 10.28$, $p <$

.01. This is in line with results from previous studies (e.g., Chen, Kyaw, & Ross, 2008; Flores, Chen, & Ross, 2014; Park, Kim, Shon, & Shim, 2013).

The Instagram posts used for the main study were created by the researcher based on the design of the brands' official Instagram pages. The researcher designed the images used on the posts by modifying existing branding images such as iPhone, Samsung Galaxy, Jackson Hewitt, and H & R Block. In Group 1, participants were shown eight Instagram posts (two for Dell, two for Jackson Hewitt, and four for two fictitious brands). The first two Dell and Jackson Hewitt posts contained customer-centric images with first-person perspective and verbal message of sales information. The other two Dell and Jackson Hewitt posts also had the customer-centric images and text message of sales information, but the view perspective of the image switched to third-person. As such, the tests of the two fictitious brands followed the same order and process. Accordingly, there are total of eight groups with 32 Instagram posts (8 for Dell 8 for Jackson Hewitt, 16 for the two fictitious brands) that were created regarding to the logical combinations of each level of visual theme, view perspective, and use of text. The same as the stimulus design in Study 1, the stimulus materials used in Study 2 are also fully functional, which the researcher believed would help to increase the effectiveness of the measurements.

Table 1

High and Low Personal Relevance of Potential Brand Stimuli

Brand	N	Personal Relevance	
		M	SD
Jackson Hewitt	28	3.36	1.28
FedEx	28	4.95	1.38
Dell	28	6.31	0.82
IBM	28	5.88	1.13
McDonalds	28	4.31	1.57
Starbucks	28	4.23	1.64
Forbes	28	4.2	1.56
GEICO	28	4.39	1.47

Participants and Procedure

The total sample size was 276, including 106 males (38.4%) and 170 females (61.6%), age ranged from 18 to 34 with a median age of 26. Each subject was assigned randomly to one of the eight experimental groups: customer-centric images with high brand familiarity, high and low personal relevance, and first- and third-person views (Group 1: n=36); customer-centric images with low brand familiarity, high and low personal relevance, and first- and third-person views (Group 2: n=34); employee-centric images with high brand familiarity, high and low personal relevance, and first- and third-person views (Group 3: n=33); employee-centric images with low brand familiarity, high

and low personal relevance , and first- and third-person views (Group 4: n=34); non-brand images with high brand familiarity, high and low personal relevance, and first- and third-person views (Group 5: n=33); non-brand images with low brand familiarity, high and low personal relevance, and first- and third-person views (Group 6: n=36); product-centric images with high brand familiarity, high and low personal relevance, and first- and third-person views (Group 7: n=36); and product-centric images with low brand familiarity, high and low personal relevance, and first- and third-person views (Group 8: n=34).

A pre-test was conducted with 28 students before the main experiment for selecting appropriate brands, finalize stimuli materials and questionnaires, and test the reliability of measurement scales. In the main study, participants signed the consent form, and were randomly assigned to one of the eight groups (conditions).

Before seeing any experimental scenarios, participants were asked to complete a set of measures that evaluated personal relevance and brand familiarity to Dell, Jackson Hewitt, and the two fictitious brands. Depending on the experimental conditions, participants were then shown an Instagram post of *Jackson Hewitt* with various visual themes of image, use of text and first-person view. They were given a few minutes to view the post and answer questions that measured brand image based on the dimensions of mystery, sensuality, and intimacy, brand love, and brand respect. After completing questions for the first post, participants were shown the second post for *Jackson Hewitt* with the third-person perspective image, and completed the same dependent measurements. The same experimental process was followed for testing Instagram posts

of Dell, and the two fictitious brands. At the end of the experiment, participants were asked for some demographic information such as age and gender.

Measure

The measurements for the main variables (personal relevant, brand familiarity, brand image, brand love, and brand respect) in this study were adapted from previous studies with necessary modifications.

Brand familiarity was measured in two ways in Study 2. First, the researcher used two well-known brands (Dell and Jackson Hewitt) and two fictitious brands for creating the experimental scenarios. In addition, during the experiment, participants were asked to rate their level of brand familiarity on a 7-point, single-item scale from “I don’t know this brand at all” to “I know this brand very well” (Verhellen, Dens, & Pelsmacker, 2015; Chung & Zhao, 2011; Dawar & Lei, 2008).

Personal relevance was measured by Zaichkowsky’s (1994) Personal Involvement Inventory. Participants were asked whether the products were “unimportant-important,” “boring-interesting,” “irrelevant-relevant,” “unexciting-exciting,” “means nothing-means a lot,” “unappealing-appealing,” “mundane-fascinating,” “worthless-valuable,” “uninvolving-involving,” and “not needed-needed”. The coefficient alpha was .97.

Brand image contains three dimensions: mystery, sensuality, and intimacy. These three dimensions were measured with three 6-, 4-, and 8-item, 7-point semantic differential scales developed by Cho, Fiore, and Russell (2014). For measuring the dimension of mystery, participants were asked to indicate whether the brand can “awaken

good memories,” “captures a sense of personal life,” “come to mind immediately,” “represent the times,” “be a part of personal life,” and “add to the experience of personal life.” The coefficient alpha was .87. For measuring the dimension of sensuality, the participants were required to rate the design of the brand, product, surrounding environment, and host media platform from “not at all impressive” to “very well done.” The coefficient alpha was .89. For measuring the dimension of intimacy, participants were asked to rate the feeling of perceived use of the brand from strongly disagree to strongly disagree. The coefficient alpha was .94.

Brand love is the first level of Roberts’ (2005) the lovemarks model and was measured by a 5-item, 7-point semantic differential scales (1=strongly disagree, 7=strongly agree). After viewing each post, participants were asked if they thought the brand “is lovely,” “is pure delight,” “is totally awesome,” “makes them feel good,” and “a wonderful brand.” The coefficient alpha was .94.

Brand respect is the second level of Roberts’ (2005) the lovemarks model and was measured by an 8-item, 7-point semantic differential scale (1=strongly disagree, 7=strongly agree). Participants were asked whether they “respect the brand,” “feel the brand is honest to them,” “feel the brand communicates well with them,” “think the brand is faithful,” “approve of the brand’s performance,” “were committed to the brand,” “feel the brand leads popular trend,” and if the brand “is responsible to them.” The coefficient alpha was .93.

CHAPTER V RESULTS

Study 1: Eye-tracking Analysis of Visual Units

Effects of Visual Themes and View Perspectives on Visual Attention

Using visual themes (customer-centric, employee-centric, non-brand, and product-centric) and view perspectives (first-person view vs. third-person view) as two between-group factors, a Multivariate Analysis of Variance (MANOVA) test was run and the main effects and interaction effects were observed and analyzed.

RQ1 concerned the effects of visual themes on participants' visual attentions. Results showed significant main effects in both total fixation duration, $F(3, 96) = 7.91, p < .001$; and fixation frequency, $F(3, 96) = 14.186, p < .001$ (see Table 2).

More specifically, a post hoc test (Bonferroni test) indicated the statistically significant differences existed between customer-centric pictures and non-brand pictures, and between product-centric pictures and non-brand pictures for total fixation duration and fixation frequency. Participants reported the Instagram posts with product-centric pictures drew their attention more frequently ($M = 22.58, SD = 12.31$) and for longer periods of time ($M = 4.65, SD = 4.02$) than the other three types of pictures (see Table 3). The total fixation duration of the posts with customer-centric pictures ($M = 4.45, SD = 3.54$) is longer than employee centric pictures ($M = 2.69, SD = 1.99$) and non-brand pictures ($M = 1.49, SD = 1.26$). Accordingly, the fixation frequency of the post with customer-centric pictures ($M = 19.23, SD = 8.13$) is also greater than employee centric pictures ($M = 13.38, SD = 8.65$) and non-brand pictures ($M = 8.31, SD = 6$).

Table 2

Multivariate Repeated Measures for Eye Tracking

Factor	Measures	<i>df</i>	<i>F</i>	η^2	<i>P</i>
<i>Between-Subjects</i>		(96)			
View Perspective (VP)	Total Fixation	1	.009	.000	.926
	Duration				
	Fixation	1	.022	.000	.882
	Frequency				
Visual Theme (VT)	Total Fixation	3	7.91	.198	.000***
	Duration				
	Fixation	3	14.186	.307	.000***
	Frequency				
VP × VT	Total Fixation	3	6.114	.160	.001***
	Duration				
	Fixation	3	5.444	.145	.002**
	Frequency				

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 3

Participants' Responses in Different Treatment Groups

Treatment		M (SD)		N	
View Perspective	Visual Theme	Total Fixation Duration	Fixation Frequency	Total Fixation Duration	Fixation Frequency
First Person	Customer Centric	5.31 (4.41)	20.00 (8.06)	13	13
	Employee Centric	3.67 (1.94)	17.85 (7.73)	13	13
	Non-brand	1.44 (0.82)	8.62 (4.74)	13	13
	Product Centric	2.76 (1.96)	17.54 (10.03)	13	13
	Total	3.30 (2.92)	16.00 (8.82)	52	52
Third Person	Customer Centric	3.60 (2.24)	18.46 (8.44)	13	13
	Employee Centric	1.71 (1.56)	8.92 (7.30)	13	13
	Non-brand	1.54 (1.62)	8.00 (7.23)	13	13
	Product Centric	6.55 (4.69)	27.62 (12.66)	13	13
	Total	3.35 (3.42)	15.75 (12.01)	52	52
Total	Customer Centric	4.45 (3.54)	19.23 (8.13)	26	26
	Employee Centric	2.69 (1.99)	13.38 (8.65)	26	26
	Non-brand	1.49 (1.26)	8.31 (6.00)	26	26
	Product Centric	4.65 (4.02)	22.58 (12.31)	26	26
	Total	3.32 (3.17)	15.88 (10.49)	104	104

As predicted in H1, it was expected that participants would pay more visual attention to Instagram posts with first-view images than the posts with third-view images.

However, results showed no significant main effects of total fixation duration, $F(1, 96) = .009, p > .9$; and fixation frequency, $F(1, 96) = .022, p > .8$ (see Table 2). Therefore, the view perspective of an image did not affect individuals' visual attentions on an Instagram post. H1 was not supported.

The second research question (RQ2) asked if interaction effects between visual themes of an Instagram post and view perspectives of an Instagram image in individuals' visual attentions (total fixation duration and fixation frequency). Such interaction effects were found for both total fixation duration, $F(3, 96) = 6.114, p < .001$; and fixation frequency, $F(3, 96) = 5.444, p < .01$ (see Table 2).

Under the first-person angle, as Table 3 indicates, participants spent the longest period of time viewing the Instagram post with a customer-centric picture on it ($M = 5.31, SD = 4.41$), followed by employee-centric picture ($M = 3.67, SD = 1.94$), product-centric picture ($M = 2.76, SD = 1.96$), and non-brand image ($M = 1.44, SD = 0.82$). Regarding to using the third-person view pictures, the post with product-centric image gained the longest fixation duration ($M = 6.55, SD = 4.69$), followed by customer-centric image ($M = 3.60, SD = 2.24$), employee-centric image ($M = 1.71, SD = 1.56$), and non-brand image ($M = 1.54, SD = 1.62$).

Table 3 also showed, under the first-person angle, participants paid the most visual attention to the Instagram post with the customer-centric image ($M = 20, SD = 8.06$), followed by employee-centric ($M = 17.85, SD = 7.73$), product centric ($M = 17.54, SD = 10.03$), and non-brand ($M = 8.62, SD = 4.74$). In terms of using the third-person view pictures, the post with product-centric image caught individuals' eyes most

frequently ($M = 27.62$, $SD = 12.66$), followed by customer-centric ($M = 18.46$, $SD = 8.44$), employee-centric ($M = 8.92$, $SD = 7.3$), and non-brand ($M = 8$, $SD = 7.23$).

In summary, the Instagram posts with product-centric pictures generated longer total fixation duration and more fixation frequency on areas of interest (AOI) than the other visual themes. Considering the interactions of visual themes and view perspectives, the post with customer-centric image with a first-person view caught more visual attention (total fixation duration and fixation frequency) on AOI. Under a third-person view, product-centric posts were more effective than other conditions on attracting visual attention.

Effect of Visual Attention on Brand Recognition

The researcher hypothesized in H2 that the longer fixation duration and fixation frequency would lead to better brand recognition performance and in H3 that using first-person view picture would increase the positive effect of participants' visual attentions on brand recognition performance. Since the recognition data were collected as dichotomous scores, a logit regression was conducted by using total fixation duration, fixation frequency, and view perspectives as independent variables and brand recognition as a dependent variable. Among these variables, view perspective and brand recognition were two categorical variables. View perspective was coded as 1 for first-person view and 2 for third person view. Brand recognition was coded as 0 for failing to recognize the brand and 1 for succeeding to recognize the brand. Result showed that H2 and H3 were partially supported (see Table 4).

Table 4

Logit Regression Results: Attention on Recognition

	Total Fixation Duration (TFD)	Fixation Frequency (FF)	First- person View (FV)	TFD×FV	FF× FV
Coefficients	-.349	.134	-5.745	-.119	.526
<i>P</i>	.103	.028*	.014*	.839	.039*

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Participants' brand recognition performances were positively influenced by fixation frequency ($p < .05$) but were not by total fixation duration ($p > .1$). Therefore, H2a was supported, but H2b was not. As shown in Table 4, the positive coefficient of the interactive of view perspective and fixation frequency ($B = .5267$) indicated using first-person view picture significantly strengthened the positive effect of fixation frequency on brand recognition performance ($p < .05$). Thus, H3a was supported. Since there was no significant effect of total fixation duration on brand recognition, the moderating effect of view perspective on the relationship between total fixation duration and brand recognition was not analyzed, so H3b was not supported.

Effect of Visual Attention on Brand Attitude

The last hypothesis in Study 1 (H4) predicted a reciprocal relationship between participants' visual attentions (average fixation duration and fixation frequency) and attitudes toward brands. For testing this hypothesis, the researcher employed a linear regression analysis using average fixation duration and fixation frequency as two independent variables, and attitude toward brand as dependent variable. According to Lee and Ahn's (2012) visual analysis, using fixation duration per each attention is more

accurate than using total fixation duration. Therefore, the average of total fixation duration was used in current study. However, the regression equations were not significant ($F(2, 95) = .511, p > .6$) with an R^2 of .011. Therefore, neither average fixation duration nor fixation frequency is a significant predictor of attitude toward brand. H4 was not supported (see Table 5).

Table 5

Regression Results: Attention on Attitude

Variable	<i>B</i>	<i>SE(B)</i>	β	<i>T</i>	<i>Sig. (p)</i>
Average Fixation Duration	1.583	1.882	.096	.841	.402
Fixation Frequency	.002	.014	.015	.129	.897
$R^2 = .011$					

Study 2: Psychological Analysis of Intellectual Units

Using visual themes (customer-centric, employee-centric, non-brand, and product-centric) and brand familiarity (familiar vs. unfamiliar) as two between-group factors, and personal relevance (low vs. high) and view perspective (first-person vs. third-person) as two within-group variables, a repeated measures test was run and main effects and interaction effects were observed and analyzed. During the pre-test, participants' responses revealed high-tech products and tax return services as the brands with the highest and lowest personal relevance. To ensure the accuracy of the selection, personal relevance was measured again with the same scale during the main experiment. Significant differences were found between the brands with high personal relevance ($M = 4.78, SD = 1.44$) and those with low personal relevance ($M = 3.62, SD = 1.54$), $t(550) = 9.14, p < .001$. Although two fictitious brands (MIUI and iQIYI) and two world famous brands (Dell and Jackson Hewitt) were used to represent the brands with low or high

familiarities, brand familiarity was still measured during the main experiment to ensure the accuracy of the selection. Significant differences were found between the brands with high brand familiarity ($M = 4.79$, $SD = 1.91$) and those with low brand familiarity ($M = 1.37$, $SD = .98$), $t(550) = 26.53$, $p < .001$.

Visual Elements on Brand Constructions

The research questions and hypotheses in Study 1 explored the relationships between visual elements (visual theme and view perspective) of Instagram posts and participants' reactions toward brand constructions on Instagram. In Study 2, RQ3 explored the effects of visual themes of Instagram post on Instagram users' responses toward brands. Results showed significant main effects in brand love, $F(3, 268) = 4.39$, $p < .01$; and three dimensions of brand image, mystery, $F(3, 268) = 3.56$, $p < .05$, sensuality, $F(3, 268) = 4.01$, $p < .01$, and intimacy, $F(3, 268) = 3.56$, $p < .05$; but not in attitude toward brand $F(3, 268) = 2.99$, $p > .1$; and brand respect $F(3, 268) = 2$, $p > .1$ (see Table 6).

Among the four visual themes, the Instagram posts with customer-centric images generated the most favorable brand image in all three dimensions, mystery ($M = 3.64$, $SD = 1.39$), sensuality ($M = 4.25$, $SD = 1.48$), and intimacy ($M = 3.70$, $SD = 1.38$). Analysis revealed more favorable brand image in the sensuality dimension ($M = 3.77$, $SD = 1.47$) and intimacy ($M = 3.37$, $SD = 1.40$) when using product-centric images rather than non-brand and employee-centric images. However, using an image without brand identity ($M = 3.42$, $SD = 1.37$) generated higher feelings of mystery than product-centric ($M = 3.27$, $SD = 1.36$) and employee-centric ($M = 3.07$, $SD = 1.31$) images. In terms of brand love, participants reported feeling more love toward customer-centric images ($M = 3.63$, $SD =$

1.45) than non-brand (M = 3.31, SD = 1.35), product-centric (M = 3.21, SD = 1.40), and employee centric (M = 2.94, SD = 1.35) images. This means that, using an image that emphasizes consumers' moments and reactions were the most effective visual branding for Instagram, while employee emphasized images were the least effective.

H4 was meant to test the effects of view perspectives used in Instagram posts based on participants' responses. With the exception of brand respect, $F(1, 268) = .16, p > .5$, there were significant main effects in attitude toward brand, $F(1, 268) = 22.84, p < .001$; brand love, $F(1, 268) = 21.71, p < .001$; and three dimensions of brand image, mystery, $F(1, 268) = 37.31, p < .001$, sensuality, $F(1, 268) = 8.26, p < .001$, and intimacy, $F(1, 268) = 25.74, p < .001$ (see Table 6).

Compared to the pictures with first-person perspective, as Table 7 indicates, participants showed a clear preference for third-person view pictures in attitude toward brand (M = 4.11, SD = 1.68), brand love (M = 3.40, SD = 1.40), and the three dimensions of brand image, mystery (M = 3.48, SD = 1.38), sensuality (M = 3.94, SD = 1.48), and intimacy (M = 3.50, SD = 1.39). Surprisingly, the results were opposite to the original hypothesis, thus H4 was not supported.

Table 6

Analysis of Variance for Effects of Visual Elements on Brand Constructions

Factor	Measures	<i>df</i>	<i>F</i>	η^2	<i>P</i>
<i>Between-Subjects</i>		(268)			

Visual Themes (VT)	Attitude	3	1.05	.01	.37
	Brand Image (Mystery)	3	3.56	.04	.02**
	Brand Image (Sensuality)	3	4.01	.04	.01**
	Brand Image (Intimacy)	3	3.56	.04	.02**
	Brand Love	3	4.39	.05	.01**
	Brand Respect	3	2.00	.02	.11
<i>Within-Subjects</i>		(268)			
Visual Perspective (VP)	Attitude	1	22.84	.08	.00****
	Brand Image (Mystery)	1	37.31	.12	.00****
	Brand Image (Sensuality)	1	8.26	.03	.00****
	Brand Image (Intimacy)	1	25.74	.09	.00****
	Brand Love	1	21.71	.08	.00****
	Brand Respect	1	.16	.00	.69

VT × VP	Attitude	3	16.62	.16	.00***
	Brand Image (Mystery)	3	7.09	.07	.00***
	Brand Image (Sensuality)	3	9.77	.10	.00***
	Brand Image (Intimacy)	3	5.43	.06	.00***
	Brand Love	3	5.36	.06	.00***
	Brand Respect	3	1.24	.00	.27

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 7

Participants' Responses in Different Treatment Groups (View Perspective and Visual Theme)

Treatment		M (SD)					
View Perspective	Visual Theme	Attitude	Brand Image (Mystery)	Brand Image (Sensuality)	Brand Image (Intimacy)	Brand Love	Brand Respect
First Person	Customer Centric	4.21 (1.52)	3.51 (1.39)	4.33 (1.45)	3.67 (1.38)	3.58 (1.48)	4.10 (1.38)
	Employee Centric	3.96 (1.56)	3.09 (1.23)	3.75 (1.37)	3.07 (1.31)	2.93 (1.33)	3.78 (1.29)
	Non-brand	3.46 (1.59)	2.91 (1.36)	3.49 (1.41)	3.14 (1.33)	3.16 (1.34)	3.62 (1.31)
	Product Centric	3.49 (1.51)	3.02 (1.33)	3.53 (1.44)	3.04 (1.36)	2.91 (1.40)	3.38 (1.46)
	Total	3.78 (1.57)	3.13 (1.35)	3.78 (1.45)	3.23 (1.37)	3.15 (1.41)	3.72 (1.38)
Third Person	Customer Centric	4.10 (1.65)	3.77 (1.38)	4.16 (1.52)	3.73 (1.39)	3.68 (1.43)	3.91 (1.35)
	Employee Centric	3.76 (1.76)	3.04 (1.39)	3.63 (1.43)	3.13 (1.36)	2.95 (1.38)	3.58 (1.49)
	Non-brand	4.26 (1.63)	3.54 (1.31)	3.94 (1.48)	3.56 (1.37)	3.45 (1.35)	3.70 (1.29)
	Product Centric	4.32 (1.65)	3.53 (1.35)	4.00 (1.46)	3.56 (1.39)	3.50 (1.45)	3.78 (1.36)
	Total	4.11 (1.68)	3.48 (1.38)	3.94 (1.48)	3.50 (1.39)	3.40 (1.40)	3.74 (1.38)

Total	Customer Centric	4.16 (1.59)	3.64 (1.39)	4.25 (1.48)	3.70 (1.38)	3.63 (1.45)	4.00 (1.37)
	Employee Centric	3.86 (1.66)	3.07 (1.31)	3.69 (1.40)	3.10 (1.33)	2.94 (1.35)	3.68 (1.39)
	Non-brand	1.86 (1.65)	3.42 (1.37)	3.87 (1.46)	3.25 (1.36)	3.31 (1.35)	3.66 (1.30)
	Product Centric	3.91 (1.63)	3.27 (1.36)	3.77 (1.47)	3.37 (1.40)	3.21 (1.40)	3.58 (1.42)
	Total	3.95 (1.64)	3.30 (1.37)	3.86 (1.47)	3.37 (1.39)	3.27 (1.41)	3.73 (1.38)

RQ5 proposed to explore the interaction effects of visual themes and view perspectives on brand constructions on Instagram. As indicated in Table 6, Interaction effects were found between visual themes and view perspectives in attitude-toward-the-brand, $F(3, 268) = 16.62, p < .001$; brand love, $F(3, 268) = 5.36, p < .001$; and three dimensions of brand image including mystery, $F(3, 268) = 7.09, p < .001$, sensuality, $F(3, 268) = 9.77, p < .001$, and intimacy, $F(3, 268) = 5.43, p < .001$ (see Table 6).

Post-hoc tests were run using Tukey's HSD. Under the first-person view, significant differences of attitude-toward-brand were found between the posts with customer-centric images ($M = 4.21, SD = 1.52$) and product-centric images ($M = 3.49, SD = 1.51$), and also between the customer-centric images and non-brand identification images ($M = 3.46, SD = 1.59$). Significant differences of brand love were also found between customer-centric images ($M = 3.58, SD = 1.48$) and employee-centric images ($M = 2.93, SD = 1.33$), as well as between customer-centric images and product-centric images ($M = 2.91, SD = 1.40$) under the first-person view. Regarding to the three dimensions of brand image under the first-person view, the feeling of mystery was significantly different between customer-centric images ($M = 3.51, SD = 1.39$) and the images without brand identifications ($M = 2.91, SD = 1.36$). The feeling of sensuality was significantly different between customer-centric images ($M = 4.33, SD = 1.45$) and product-centric images ($M = 3.53, SD = 1.44$), between customer-centric image and the images without brand identification ($M = 3.49, SD = 1.41$), as well as between customer-centric images and employee-centric images ($M = 3.75, SD = 1.37$). For the feeling of intimacy under the first-person view, significant differences were found between customer-centric images and employee-centric images, between customer-centric images

($M = 3.67$, $SD = 1.38$) and the images without brand identifications ($M = 3.14$, $SD = 1.33$), and also customer-centric images and product-centric image ($M = 3.04$, $SD = 1.36$).

Under a third-person view perspective, no significant differences emerged among four types of visual themes on attitudes toward brand. However, significant differences were found in brand love between customer-centric images ($M = 3.68$, $SD = 1.43$) and employee-centric images ($M = 2.95$, $SD = 1.38$); in feeling of mystery between customer-centric images ($M = 3.77$, $SD = 1.38$) and employee-centric images ($M = 3.04$, $SD = 1.39$); in feeling of sensuality between customer-centric images ($M = 4.16$, $SD = 1.52$) and employee-centric images ($M = 3.63$, $SD = 1.43$); and in in feeling of intimacy between customer-centric images ($M = 3.73$, $SD = 1.39$) and employee-centric images ($M = 3.13$, $SD = 1.36$). Generally speaking, under the first-person view, the Instagram post that emphasized customer lifestyle generated the most favorable attitude toward brand, brand love, and brand image. In comparison, using the third-person view, participants who saw the customer-centric posts reported stronger brand love and more positive brand image than other experimental conditions as well.

Personal Relevance

Hypothesis five (H5) tested moderating effects of personal relevance with regard to visual effects (visual theme and view perspective). This hypothesis was supported. Significant main effects were found for personal relevance in attitude-toward-the-ad, $F(1, 268) = 48.60$, $p < .01$; brand love $F(1, 268) = 9.83$, $p < .01$; brand respect, $F(1, 268) = 22.66$, $p < .01$; and three dimensions of brand image including mystery, $F(1, 268) = 12.46$, $p < .01$, sensuality, $F(1, 268) = 53.51$, $p < .01$, and intimacy, $F(1, 268) = 15.00$, p

< .01 (see Table 8). As Table 9 indicated, the product with high relevance generated more favorable attitude-toward-the-ad (M = 4.21, SD = 1.61), stronger brand love (M = 3.36, SD = 1.43), stronger brand respect (M = 3.85, SD = 1.38), and more positive brand image with feeling of mystery (M = 3.41, SD = 1.37), sensuality (M = 4.09, SD = 1.45), and intimacy (M = 3.47, SD = 1.40).

Table 8

Analysis of Variance for Effects of Personal Relevance on Brand Constructions

Factor	Measures	<i>df</i>	<i>F</i>	η^2	<i>P</i>
<i>Between-Subjects</i>		(268)			
Visual Themes (VT)	Attitude	3	1.05	.01	.37
	Brand Image (Mystery)	3	3.56	.04	.02**
	Brand Image (Sensuality)	3	4.01	.04	.01**
	Brand Image (Intimacy)	3	3.56	.04	.02**
	Brand Love	3	4.39	.05	.01**
	Brand Respect	3	2.00	.02	.11
	<i>Within-Subjects</i>		(268)		

Visual Perspective (VP)	Attitude	1	22.84	.08	.00***
	Brand Image (Mystery)	1	37.31	.12	.00***
	Brand Image (Sensuality)	1	8.26	.03	.00***
	Brand Image (Intimacy)	1	25.74	.09	.00***
	Brand Love	1	21.71	.08	.00***
	Brand Respect	1	.16	.00	.69
	Personal Relevance (PR)	Attitude	1	48.60	.15
	Brand Image (Mystery)	1	12.46	.04	.00***
	Brand Image (Sensuality)	1	53.51	.17	.00***
	Brand Image (Intimacy)	1	15.00	.05	.00***
	Brand Love	1	9.83	.04	.00***
	Brand Respect	1	22.66	.08	.00***
VT × PR	Attitude	3	8.48	.09	.00***

	Brand Image (Mystery)	3	7.42	.08	.00****
	Brand Image (Sensuality)	3	3.37	.04	.02*
	Brand Image (Intimacy)	3	6.63	.07	.00****
	Brand Love	3	5.11	.05	.00****
	Brand Respect	3	8.00	.08	.00****
VP × PR	Attitude	1	40.08	.13	.00****
	Brand Image (Mystery)	1	25.22	.09	.00****
	Brand Image (Sensuality)	1	41.39	.13	.00****
	Brand Image (Intimacy)	1	26.93	.09	.00****
	Brand Love	1	22.21	.08	.00****
	Brand Respect	1	31.32	.11	.00****
VT × VP × PR	Attitude	3	3.79	.04	.01**
	Brand Image (Mystery)	3	.85	.01	.47

Brand Image (Sensuality)	3	1.13	.01	.34
Brand Image (Intimacy)	3	.77	.01	.51
Brand Love	3	1.56	.02	.20
Brand Respect	3	1.19	.01	.32

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 9

Participants' Responses in Different Treatment Groups (View Perspective, Visual Theme and Personal Relevance)

Treatment		M (SD)					
Personal Relevance	Visual Theme	Attitude	Brand Image (Mystery)	Brand Image (Sensuality)	Brand Image (Intimacy)	Brand Love	Brand Respect
High	Customer Centric	4.69 (1.45)	3.96 (1.32)	4.65 (1.39)	4.00 (1.35)	3.87 (1.46)	4.29 (1.37)
	Employee Centric	4.21 (1.64)	3.20 (1.30)	3.94 (1.39)	3.23 (1.35)	3.09 (1.33)	3.85 (1.37)
	Non-brand	3.93 (1.59)	3.23 (1.30)	3.88 (1.39)	3.39 (1.27)	3.31 (1.31)	3.72 (1.20)
	Product Centric	3.99 (1.65)	3.23 (1.42)	3.90 (1.50)	3.26 (1.49)	3.17 (1.47)	3.54 (1.47)
	Total	4.21 (1.61)	3.41 (1.37)	4.09 (1.45)	3.47 (1.40)	3.36 (1.43)	3.85 (1.38)
	Customer Centric	3.62 (1.54)	3.32 (1.39)	3.85 (1.46)	3.40 (1.35)	3.38 (1.41)	3.72 (1.31)
Low	Employee Centric	3.51 (1.62)	2.93 (1.31)	3.44 (1.36)	2.97 (1.30)	2.79 (1.36)	3.50 (1.40)
	Non-brand	3.78 (1.71)	3.22 (1.44)	3.55 (1.51)	3.31 (1.45)	3.31 (1.39)	3.60 (1.39)
	Product Centric	3.82 (1.61)	3.31 (1.30)	3.64 (1.42)	3.33 (1.31)	3.24 (1.34)	3.62 (1.38)
	Total	3.68 (1.62)	3.20 (1.37)	3.62 (1.44)	3.26 (1.36)	3.19 (1.39)	3.61 (1.37)

Total	Customer Centric	4.16 (1.59)	3.64 (1.39)	4.25 (1.48)	3.70 (1.38)	3.63 (1.45)	4.00 (1.37)
	Employee Centric	3.86 (1.66)	3.07 (1.31)	3.69 (1.40)	3.10 (1.33)	2.94 (1.35)	3.68 (1.39)
	Non-brand	1.86 (1.65)	3.42 (1.37)	3.87 (1.46)	3.25 (1.36)	3.31 (1.35)	3.66 (1.30)
	Product Centric	3.91 (1.63)	3.27 (1.36)	3.77 (1.47)	3.37 (1.40)	3.21 (1.40)	3.58 (1.42)
	Total	3.95 (1.64)	3.30 (1.37)	3.86 (1.47)	3.37 (1.39)	3.27 (1.41)	3.73 (1.38)

Interaction effects were found between visual theme and personal relevance in attitude toward brand, $F(3, 268) = 8.48, p < .001$; brand love, $F(3, 268) = 5.11, p < .001$; brand respect, $F(3, 268) = 8.00, p < .001$; and three dimensions of brand image of mystery, $F(3, 268) = 7.42, p < .001$, sensuality, $F(3, 268) = 3.37, p < .05$, and intimacy, $F(3, 268) = 6.63, p < .001$. Post-hoc tests were run using Tukey's HSD. For the product with low personal relevance, the only significant difference was found in brand love between customer-centric images ($M = 3.38, SD = 1.41$) and employee centric images ($M = 2.79, SD = 1.36$).

For the product with high personal relevance, significant differences were found in attitude-toward-the-ad between customer-centric images ($M = 4.69, SD = 1.45$) and images without brand identities ($M = 3.93, SD = 1.59$), as well as between customer-centric images and product-centric images ($M = 3.99, SD = 1.65$). Differences were also found in brand love between customer-centric image ($M = 3.87, SD = 1.46$) and employee-centric images ($M = 3.09, SD = 1.33$), between customer-centric images and the images without brand identities ($M = 3.31, SD = 1.31$), as well as between customer-centric images and product-centric images ($M = 3.17, SD = 1.47$). Under the high personal relevance product, participants showed significantly stronger brand respect when they viewed the Instagram post with customer-centric images ($M = 4.29, SD = 1.37$) than images without brand identifications ($M = 3.72, SD = 1.20$) and product-centric images ($M = 3.54, SD = 1.47$). In terms of the brand image, the post-hoc tests also showed the significant differences in mystery between customer-centric images ($M = 3.96, SD = 1.32$) and employee-centric images ($M = 3.20, SD = 1.30$), non-brand-centric images ($M = 3.23, SD = 1.30$), and product-centric images ($M = 3.23, SD = 1.42$); in

sensuality between customer-centric images ($M = 4.65$, $SD = 1.39$) and employee-centric images ($M = 3.94$, $SD = 1.39$), non-brand-centric images ($M = 3.88$, $SD = 1.39$), and product-centric images ($M = 3.90$, $SD = 1.50$); and in intimacy between customer-centric images ($M = 4.00$, $SD = 1.35$) and employee-centric images ($M = 3.23$, $SD = 1.35$), non-brand-centric images ($M = 3.39$, $SD = 1.27$), and product-centric images ($M = 3.26$, $SD = 1.49$).

In addition, interaction effects also existed between view perspective and personal relevance in attitude toward brand, $F(1, 268) = 40.08$, $p < .001$; brand love, $F(1, 268) = 22.21$, $p < .001$; brand respect, $F(1, 268) = 31.32$, $p < .001$; and three dimensions of brand image of mystery, $F(1, 268) = 25.22$, $p < .001$, sensuality, $F(1, 268) = 41.39$, $p < .001$, and intimacy, $F(1, 268) = 26.93$, $p < .001$. Under high personal relevance, compared with the first-person view, the images with third-person view angle generated more favorable attitude toward brand ($M = 4.61$, $SD = 1.49$), stronger brand love ($M = 3.61$, $SD = 1.37$), more brand respect ($M = 4.00$, $SD = 1.35$), and more positive brand image as related to mystery ($M = 3.71$, $SD = 1.32$), sensuality ($M = 4.37$, $SD = 1.40$), and intimacy ($M = 3.75$, $SD = 1.36$). Under low personal relevance, the first-person view images led to more favorable attitude toward brand ($M = 3.76$, $SD = 1.52$), more brand respect ($M = 3.74$, $SD = 1.37$), and stronger feeling of sensuality ($M = 3.73$, $SD = 1.45$).

A three-way interactions effect was also found among visual theme, view perspective, and personal relevance in attitude toward brand, $F(3, 268) = 3.79$, $p < .05$. For the brand with high personal relevance, participants generated significantly more positive attitude toward the brand when they saw the Instagram post with customer-centric images taken in the first-person angle ($M = 4.71$, $SD = 1.46$) and the post with

images taken in the third-person angle without any brand identification ($M = 4.69$, $SD = 1.34$) than any other experimental conditions with high personal relevance. For the brand with low personal relevance, participants reported significantly more positive attitudes toward the brand when they viewed the post with product-centric images taken in the third-person angle ($M = 4.02$, $SD = 1.69$) and the post with employee-centric images taken in the first-person angle ($M = 3.96$, $SD = 1.50$) than any other experimental conditions with low personal relevance.

Overall, based on the findings mentioned earlier, the customer-centric post seems to be the most effective in visual branding on Instagram without considering the moderating effects of the personal relevance. However, personal relevance to a brand did make a difference regarding attitude-toward-brand. For the high-personal-relevance brand, the posts with product-centric and employee-centric brand led to more favorable attitudes toward brand than the posts with customers-centric images and the images without brand identities when the posts were portrayed under the third-person view.

Brand Familiarity

Hypothesis six predicted interaction effects between visual elements (visual theme and visual perspective) in Instagram visual branding and brand familiarity. Since no significant interaction effects were found, neither between visual theme and brand familiarity, nor between view perspective and brand familiarity, H6 was not supported. However, results showed significant main effects for brand familiarity in attitude toward brand, $F(1, 268) = 6.64$, $p < .05$; brand love, $F(1, 268) = 4.78$, $p < .05$; brand respect, $F(1, 268) = 4.57$, $p < .05$; mystery, $F(1, 268) = 4.51$, $p < .05$; and intimacy, $F(1, 268) = 4.60$, $p < .05$ (see Table 10). Compared to unknown brands, as Table 11 and Table 12 shows, the

more familiar brand led to more favorable attitudes toward brand ($M = 4.12$, $SD = 1.63$), stronger brand love ($M = 3.43$, $SD = 1.45$), stronger brand respect ($M = 3.88$, $SD = 1.36$), more feeling of mystery ($M = 3.45$, $SD = 1.39$) and intimacy ($M = 3.51$, $SD = 1.39$).

Table 10

Analysis of Variance for Effects of Brand Familiarity on Brand Constructions

Factor	Measures	<i>df</i>	<i>F</i>	η^2	<i>P</i>
<i>Between-Subjects</i>		(268)			
Visual Themes (VT)	Attitude	3	1.05	.01	.37
	Brand Image (Mystery)	3	3.56	.04	.02**
	Brand Image (Sensuality)	3	4.01	.04	.01**
	Brand Image (Intimacy)	3	3.56	.04	.02**
	Brand Love	3	4.39	.05	.01**
	Brand Respect	3	2.00	.02	.11
	Brand Familiarity (BF)	Attitude	1	6.64	.02
	Brand Image (Mystery)	1	4.51	.02	.04*

	Brand Image (Sensuality)	1	3.38	.01	.07
	Brand Image (Intimacy)	1	4.60	.02	.03*
	Brand Love	1	4.78	.02	.03*
	Brand Respect	1	4.57	.02	.03*
VT × BF	Attitude	3	1.12	.01	.34
	Brand Image (Mystery)	3	2.62	.03	.05
	Brand Image (Sensuality)	3	2.18	.02	.09
	Brand Image (Intimacy)	3	1.71	.02	.17
	Brand Love	3	1.48	.02	.22
	Brand Respect	3	1.32	.02	.27
<i>Within-Subjects</i>			(268)		
Visual Perspective (VP)	Attitude	1	22.84	.08	.00****
	Brand Image (Mystery)	1	37.31	.12	.00****

	Brand Image (Sensuality)	1	8.26	.03	.00****
	Brand Image (Intimacy)	1	25.74	.09	.00****
	Brand Love	1	21.71	.08	.00****
	Brand Respect	1	.16	.00	.69
Personal Relevance (PR)	Attitude	1	48.60	.15	.00****
	Brand Image (Mystery)	1	12.46	.04	.00****
	Brand Image (Sensuality)	1	53.51	.17	.00****
	Brand Image (Intimacy)	1	15.00	.05	.00****
	Brand Love	1	9.83	.04	.00****
	Brand Respect	1	22.66	.08	.00****
VP × BF	Attitude	1	.81	.00	.37
	Brand Image (Mystery)	1	.96	.00	.33
	Brand Image (Sensuality)	1	.04	.00	.85

	Brand Image	1	.05	.00	.82
	(Intimacy)				
	Brand Love	1	.16	.00	.69
	Brand Respect	1	.26	.00	.61
PR × BF	Attitude	1	.03	.00	.86
	Brand Image	1	.37	.00	.54
	(Mystery)				
	Brand Image	1	2.27	.01	.13
	(Sensuality)				
	Brand Image	1	2.67	.01	.10
	(Intimacy)				
	Brand Love	1	.81	.00	.37
	Brand Respect	1	.22	.00	.64
VT × VP × BF	Attitude	3	.41	.01	.75
	Brand Image	3	.48	.01	.69
	(Mystery)				
	Brand Image	3	.81	.01	.49
	(Sensuality)				

	Brand Image (Intimacy)	3	.24	.00	.88
	Brand Love	3	.41	.01	.74
	Brand Respect	3	1.32	.02	.27
VT × PR × BF	Attitude	3	1.20	.01	.31
	Brand Image (Mystery)	3	.06	.00	.98
	Brand Image (Sensuality)	3	.73	.01	.53
	Brand Image (Intimacy)	3	.29	.00	.83
	Brand Love	3	.84	.01	.47
	Brand Respect	3	.93	.01	.43
VP × PR × BF	Attitude	1	.37	.00	.54
	Brand Image (Mystery)	1	.06	.00	.81
	Brand Image (Sensuality)	1	.12	.00	.73
	Brand Image (Intimacy)	1	.08	.00	.77

	Brand Love	1	3.66	.01	.06
	Brand Respect	1	5.56	.02	.02*
VT × VP × PR × BF	Attitude	3	3.00	.03	.03*
	Brand Image (Mystery)	3	1.42	.02	.24
	Brand Image (Sensuality)	3	2.82	.03	.04*
	Brand Image (Intimacy)	3	1.85	.02	.14
	Brand Love	3	2.53	.03	.06
	Brand Respect	3	3.34	.04	.02*

Note: * p < .05; ** p < .01; *** p < .001

The last two research questions (RQ6 and RQ7) asked if interaction effects existed among visual theme, view perspective, personal relevance, and brand familiarity. The only three-way interactions effect was found among visual perspective, personal relevance, and brand familiarity in brand respect, $F(1, 268) = 5.56, p < .05$. When a brand was familiar, the low personal relevance Instagram post with third-person view angle generated significantly less brand respect ($M = 3.69, SD = 1.34$) than any other situation. When a brand was unfamiliar, the low personal relevance Instagram post with third-person view angle also generated significantly less brand respect ($M = 3.28, SD = 1.34$) compared with other situations. Across all eight experimental conditions, using the high

personal relevance Instagram posts with third-person angle image to promote a familiar brand received the strongest brand respect ($M = 4.07$, $SD = 1.37$).

In addition, a trio of four-way interaction effects were found among visual theme, visual perspective, brand familiarity, and personal relevance in attitude toward brand, $F(3, 268) = 3.00$, $p < .05$; brand respect, $F(1, 268) = 3.34$, $p < .05$; and feeling of sensuality, $F(1, 268) = 2.82$, $p < .05$. Using the high personal relevance Instagram posts with first-person angle and customer-centric images to promote a familiar brand received the most favorable attitude ($M = 5.06$, $SD = 1.21$), strongest brand respect ($M = 4.55$, $SD = 1.46$), and strongest feeling of sensuality ($M = 4.55$, $SD = 1.46$) toward the brand in all experimental conditions. Conversely, using the low personal relevance Instagram posts with first-person angle and product-centric images to promote an unfamiliar brand received the least favorable attitude ($M = 3.03$, $SD = 1.51$), and weakest feeling of sensuality ($M = 2.99$, $SD = 1.5$) toward the brand in all experimental conditions. Finally, using the high personal relevance Instagram posts with first-person angle and product-centric images to promote an unfamiliar brand resulted the least brand respect ($M = 2.87$, $SD = 1.45$) in all experimental conditions.

Therefore, although participants had more favorable attitude, more positive image, and stronger love and respect toward a familiar brand compared to an unknown brand, brand familiarity did not have moderating effects on the relationship between visual elements and brand constructions. However, visual perspective, personal relevance, and brand familiarity did have interaction effects on brand respect. Using the Instagram post with the third-person angle image to promote a familiar brand with high personal relevance received stronger brand respect than other conditions, while the results

for low personal relevance and unknown brand yielded the opposite. Eventually, the various combinations among visual themes, visual perspectives, brand familiarity, and personal relevance showed different effects on attitudes toward brand, brand respect, and feeling of sensuality. It seems that the interaction among high personal relevance, first-person view, customer-centric images and familiar brand led to the highest attitude toward brand, brand respect, and feeling of sensuality. On the other hand, the combination of high personal relevance, first-person view, product-centric theme, and unfamiliar brand led to the least brand respect. The condition of low personal relevance, first-person view, product-centric theme, and unfamiliar brand generated a lower feeling of sensuality but a favorable attitude.

Table 11

Participants' Responses in Different Treatment Groups (First-person View Perspective, Visual Theme, Personal Relevance, and Brand Familiarity)

Treatment				M (SD)						
View Perspective	Personal Relevance	Visual Theme	Brand Familiarity	Attitude-toward-the-brand	Brand Image Mystery	Brand Image Sensuality	Brand Image Intimacy	Brand Love	Brand Respect	
First Person	High	Customer Centric	High	5.06 (1.21)	4.06 (1.44)	4.94 (1.41)	4.18 (1.45)	4.18 (1.51)	4.55 (1.46)	
			Low	4.33 (1.62)	3.39 (1.23)	4.14 (1.48)	3.59 (1.23)	3.35 (1.40)	4.04 (1.34)	
		Employee Centric	High	4.12 (1.70)	2.99 (1.30)	3.61 (1.41)	3.05 (1.51)	2.80 (1.48)	3.73 (1.40)	
			Low	3.82 (1.57)	3.17 (1.13)	3.93 (1.31)	3.00 (1.21)	2.98 (1.06)	3.76 (1.10)	
		Non-brand	High	3.35 (1.63)	2.72 (1.26)	3.52 (1.25)	3.19 (1.12)	3.30 (1.29)	3.74 (1.11)	
			Low	3.03 (1.33)	2.74 (1.30)	3.29 (1.27)	2.82 (1.28)	2.72 (1.34)	3.29 (1.26)	
		Product Centric	High	3.39 (1.49)	3.12 (1.38)	3.85 (1.35)	3.11 (1.48)	3.09 (1.55)	3.58 (1.46)	
			Low	3.34 (1.55)	2.64 (1.32)	3.22 (1.48)	2.62 (1.31)	2.46 (1.28)	2.87 (1.45)	
		Low	Customer Centric	High	3.88 (1.47)	3.52 (1.48)	4.13 (1.44)	3.71 (1.38)	3.49 (1.57)	3.99 (1.30)
				Low	3.55	3.04	4.10	3.18	3.25	3.80

		(1.36)	(1.26)	(1.33)	(1.32)	(1.29)	(1.37)
Employee Centric	High	3.70 (1.49)	2.84 (1.39)	3.64 (1.43)	2.88 (1.37)	2.89 (1.44)	3.73 (1.46)
	Low	4.22 (1.48)	3.36 (1.07)	3.81 (1.36)	3.34 (1.13)	3.02 (1.36)	3.88 (1.22)
Non-brand	High	3.71 (1.82)	3.07 (1.41)	3.49 (1.60)	3.19 (1.45)	3.19 (1.36)	3.70 (1.35)
	Low	3.74 (1.53)	3.11 (1.46)	3.66 (1.52)	3.36 (1.42)	3.46 (1.30)	3.76 (1.46)
Product Centric	High	4.18 (1.31)	3.55 (1.07)	4.0 (1.64)	3.58 (1.08)	3.44 (1.26)	3.97 (1.21)
	Low	3.03 (1.51)	2.72 (1.39)	2.99 (1.55)	2.83 (1.41)	2.61 (1.31)	3.07 (1.50)

Table 12

Participants' Responses in Different Treatment Groups (Third-person View Perspective, Visual Theme, Personal Relevance, and Brand Familiarity)

Treatment				M (SD)						
View Perspective	Personal Relevance	Visual Theme	Brand Familiarity	Attitude toward-the-brand	Brand Image Mystery	Brand Image Sensuality	Brand Image Intimacy	Brand Love	Brand Respect	
Third Person	High	Customer Centric	High	4.88 (1.09)	4.45 (1.18)	4.81 (1.25)	4.34 (1.39)	4.07 (1.53)	4.32 (1.48)	
			Low	4.45 (1.75)	3.90 (1.24)	4.66 (1.35)	3.84 (1.26)	3.85 (1.33)	4.24 (1.18)	
		Employee Centric	High	4.50 (1.63)	3.30 (1.40)	4.16 (1.49)	3.38 (1.35)	3.20 (1.44)	3.91 (1.69)	
			Low	4.41 (1.63)	3.35 (1.38)	4.07 (1.37)	3.49 (1.32)	3.36 (1.29)	4.01 (1.29)	
		Non-brand	High	4.75 (1.49)	3.80 (1.07)	4.48 (1.47)	3.92 (1.13)	3.72 (1.21)	3.91 (1.13)	
			Low	4.63 (1.20)	3.66 (1.18)	4.25 (1.23)	3.66 (1.31)	3.53 (1.22)	3.94 (1.22)	
		Product Centric	High	5.06 (1.41)	3.98 (1.28)	4.70 (1.24)	4.06 (1.31)	3.88 (1.29)	4.10 (1.12)	
			Low	4.16 (1.60)	3.14 (1.41)	3.76 (1.60)	3.23 (1.51)	3.21 (1.44)	3.58 (1.60)	
		Low	Customer Centric	High	3.73 (1.55)	3.65 (1.29)	3.77 (1.38)	3.56 (1.32)	3.65 (1.37)	4.06 (1.26)

Centric	Low	3.31 (1.74)	3.06 (1.47)	3.39 (1.60)	3.14 (1.34)	3.13 (1.37)	3.00 (1.08)
	High	3.22 (1.83)	2.77 (1.47)	3.14 (1.30)	2.79 (1.41)	2.64 (1.48)	3.17 (1.47)
Employee Centric	Low	2.91 (1.42)	2.76 (1.23)	3.16 (1.27)	2.85 (1.28)	2.62 (1.19)	3.21 (1.36)
	High	4.02 (1.88)	3.36 (1.50)	3.36 (1.50)	3.42 (1.41)	3.42 (1.48)	3.61 (1.41)
Non-brand	Low	3.64 (1.68)	3.34 (1.42)	3.68 (1.49)	3.28 (1.57)	3.15 (1.44)	3.35 (1.35)
	High	4.34 (1.58)	3.72 (1.03)	3.97 (1.23)	3.63 (.98)	3.67 (1.07)	3.86 (1.13)
Product Centric	Low	3.67 (1.75)	3.23 (1.51)	3.54 (1.53)	3.27 (1.60)	3.21 (1.50)	3.55 (1.51)

CHAPTER VI DISCUSSION

The purposes of the current study were to comprehensively examine how visual and intellectual units work together on visual-based social media to build a positive brand image. By (a) investigating the influence of visual elements (visual theme and view perspective) on consumers' visual attentions (total fixation duration, average fixation duration, and fixation frequency on AOI), (b) examining the effects of visual attention on consumers' brand recognition and attitude toward brand, (c) testing the effects of visual elements on brand constructions, and (d) taking a deeper look at the moderating roles of personal relevance and brand familiarity, this study intended to provide an in-depth visual branding solution for Instagram.

Visual Elements and Visual Attention

The effects of various advertising design elements (such as speed of animation movement, web color, and ad location) on viewers' visual attentions have been extensively examined in visual communication research, especially in eye-tracking studies (e.g., Lee & Ahn, 2012; Yang, 2015), but few studies have tested if visual themes (customer-centric, employee centric, non-brand, and product-centric) and view perspectives (first- and third-person view) influence viewers' attention. Collecting and analyzing data of total fixation duration and fixation frequency on AOI, this study is an effort to add to our understanding of visual attention and brand awareness in visual communication research.

The findings of the study suggest that Instagram posts with product- and customer-centric images draw viewers' attentions more frequently and for longer periods

of time on AOI than other visual themes. The differences of attention amount among the four visual themes could be caused by the functions of visual-based social media and users' motivations for using such a kind of social media. According to previous studies and industrial reports (Baumeister & Leary, 1995; Bryant, 2016; Highfield, 2015; Quentin, 2017; Swant, 2015;), the most popular functions of Instagram are “selfies” and “filters.” Self-expression and self-portrait are the most important motivations for using Instagram. These factors work together to make Instagram a unique visual and media platform (Scheldon & Bryant, 2015). In the same vein, when brands join Instagram, products and subjects with strong brand identifications (such as logo, mascot, and brand ambassador) could be the best “selfies” of the brand. Therefore, consumers may get used to anchoring their eyes on these product-centric images.

Same as most new media platforms, Instagram is a two-way, interactive communication tool that allows users to communicate with each other and develop more UGC about the brand (Johnson & Yang, 2009; Quan-Haase & Young, 2010; Whiting & Williams, 2013; Zhao & Rosson, 2009). Different from TV commercials or traditional advertising, businesses on Instagram have more access to users' lifestyles, experiences, and post-purchase moments (Pai & Arnott, 2013; Zhao & Rosson, 2009). In other words, on Instagram, branding is supposed to be a consumer-dominated, storytelling-based, and user-generated campaign. This reality could be the reason that posts featuring consumers attract more visual attention on AOI than employee-centric and non-brand identification posts.

Consistent with previous studies (e.g., Anquetil & Jeannerod, 2007; Yu, 2014), results of the current study suggest that there is no significant main effect of view perspective on visual attention. However, interaction effects were found between view perspective and visual theme. Although many visual studies suggest first-person view images provide a deeper self-involvement feeling (e.g., Pazuchanics, 2006; Rouse III, 1999) and Reeves and Nass's (1998) media equation model proved that the closer visual distance could lead to more visual attention, the results from the current study argue that such attention catching strategies not only require certain visual design techniques (such as switch the view perspective or change a camera angle), but also need to account for the subject matter (such as visual theme or media type). For example, the findings of this study indicated under the first-person angle, customer-centric pictures generated significantly longer fixation durations and fixation frequency on AOI. For the third-person view, product-centric images led significantly longer fixation durations and fixation frequency on AOI.

As mentioned before, Instagram is an effective vehicle for UGC and makes interactive communication among consumers possible. Seeing and sharing consumers' visual stories about their experiences with the brand is one of the more important motivations to visit a brand's Instagram posts. In such a communication model, consumers are not only information receivers, but also co-creators of brand value with organizations on Instagram. Consumers who are highly active in a brand's Instagram posts are most likely to have high emotional involvement, brand loyalty, and strong self-conception toward the brand (Christodoulides, Jevons, & Bonhomme, 2012). Not

surprisingly, a customer-centric image with the first-person view could be able to reinforce feelings of “owner and co-creation” and be able to catch more visual attentions. On the other hand, when Instagram users only want to see appearances of some products and search for some visual information about a brand, compared with a dramatic first-person view image, a third-person view picture with emphasis on products provides a clearer and more objective landscape of the products, and subsequently catch a quick visual attention (Bateman et al., 2011). In the perspective of congruency, generally speaking, individuals expected to see more human-focused content in a selfie, but more demonstrations in a third-person view.

Visual Attention and Brand Recognition

The finding that brand recognition performances were positively influenced by fixation frequency on AOI, but were not affected by total fixation duration is opposite to Lee and Ahn’s (2012) eye-tracking experiment that suggested total fixation duration had a significant influence on brand memory in banner ads, but not fixation frequency. This unexpected result is somewhat consistent with Dreze and Hussherr’s (2003) finding that the repeat exposure effect known as exposure frequency could positively influence individuals’ abilities of brand awareness and brand recall.

In this study, using the experimental condition of product-centric Instagram post with first-person view as an example, brand logo and other identifications appeared at least once in each AOI (see Figure 3). As demonstrated in the heat map (see Figure 4) and gaze plot (see Figure 5), although participants’ eyes stayed inside of AOI, they would like to gaze at the area with bright colors, familiar subjects, or negative spaces

rather than the area with brand identification. That means despite some AOIs have long fixation durations, limited time was spent on watching brand identifications. In comparison, according to the gaze plot (see Figure 5), most participants looked at the subjects with brand identification more than once, although each time had a short fixation duration. Cluster figure (see Figure 6) showed among three product-centric Instagram posts with the first-person view, there are 85% participants in Post 1, 77% participants in Post 2, and 62% participants saw the brand logo at least once. Therefore, increasing the frequency of visual repetition is more effective in improving participants' brand recognition performances than extending the length of fixation duration in current study. Since the first-person view design could work as a leading line to direct a participant's eyes movement (Rouse III, 1999), using first-person view picture significantly reinforced the positive effect of fixation frequency on brand recognition performance.

Visual Attention and Attitude toward Brand

According to previous studies (Lee & Ahn, 2012; Kunst-Wilson & Zajonc, 1980; Zajonc, 2001), a stimulus such as an ad was quickly disclosed can generate a more favorable attitude toward the stimulus. However, such mere exposure effect did not appear in the current study. Findings showed neither average fixation duration nor fixation frequency is a significant predictor of attitude toward brand. This result may relate to participants' unconscious levels to the experimental stimulus. As Zajonc (2001) pointed out, the mere exposure effect most likely appeared when the stimulus is not realized. In other words, the mere exposure effect may only exist among the participants who did not recognize the brands to which they were exposed. However, individuals who

participated in the experiment for this study were told they were going to see some Instagram posts from several brands before the experiment began. Therefore, they have had the preparations and high consciousness level before and during the experiment.

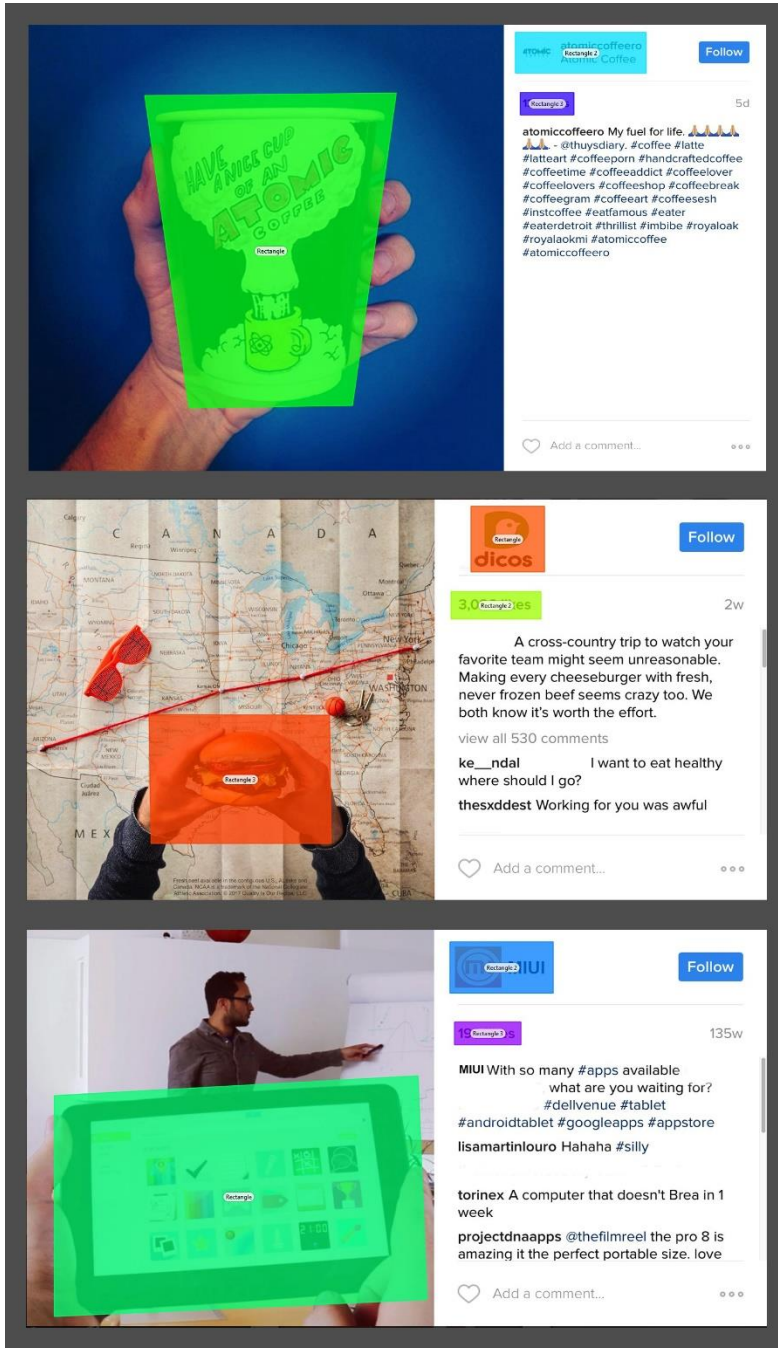


Figure 3. AOIs for first-person view product-centric condition.

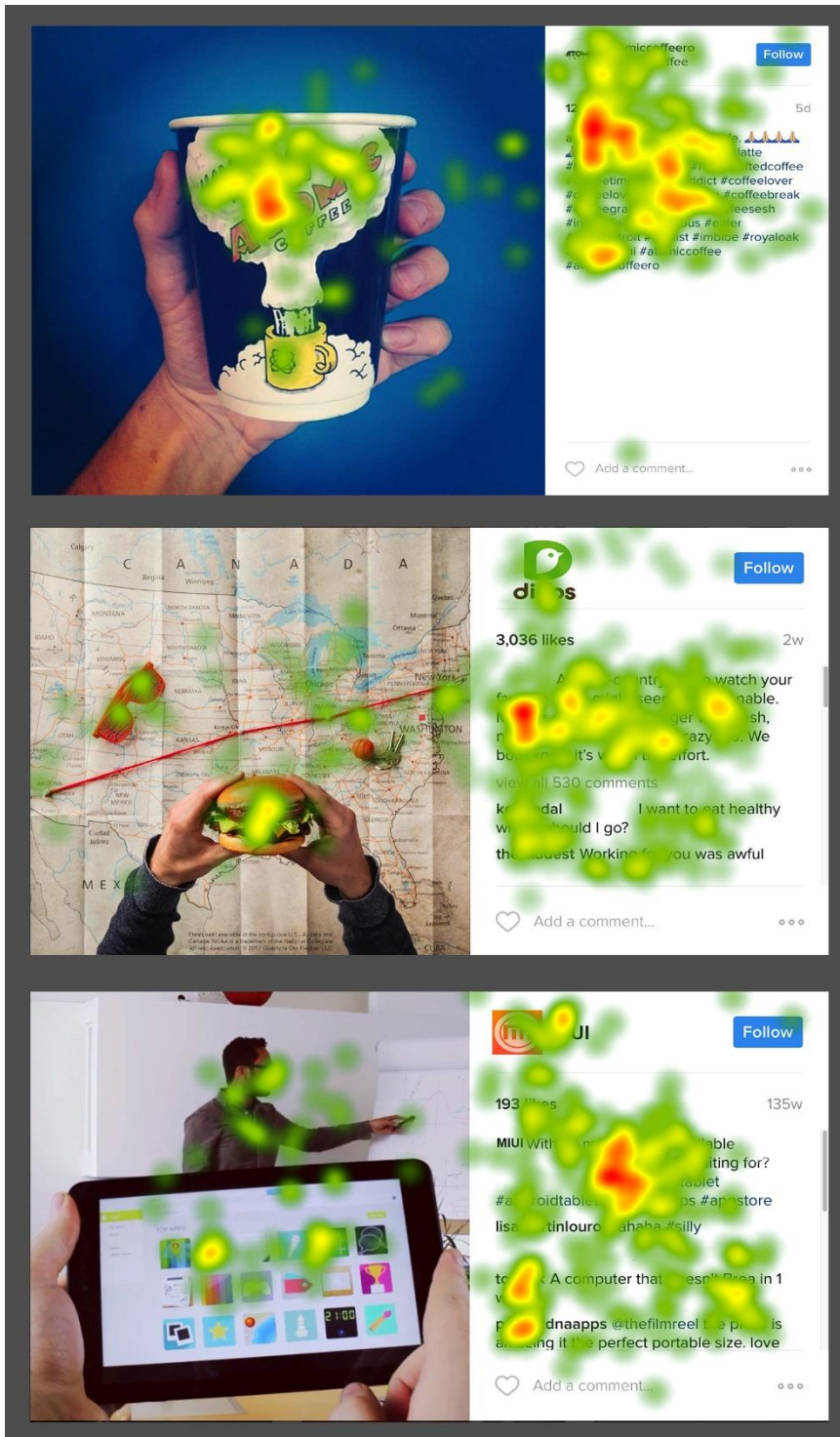


Figure 4. Heat map of AOI for first-person view product-centric condition.

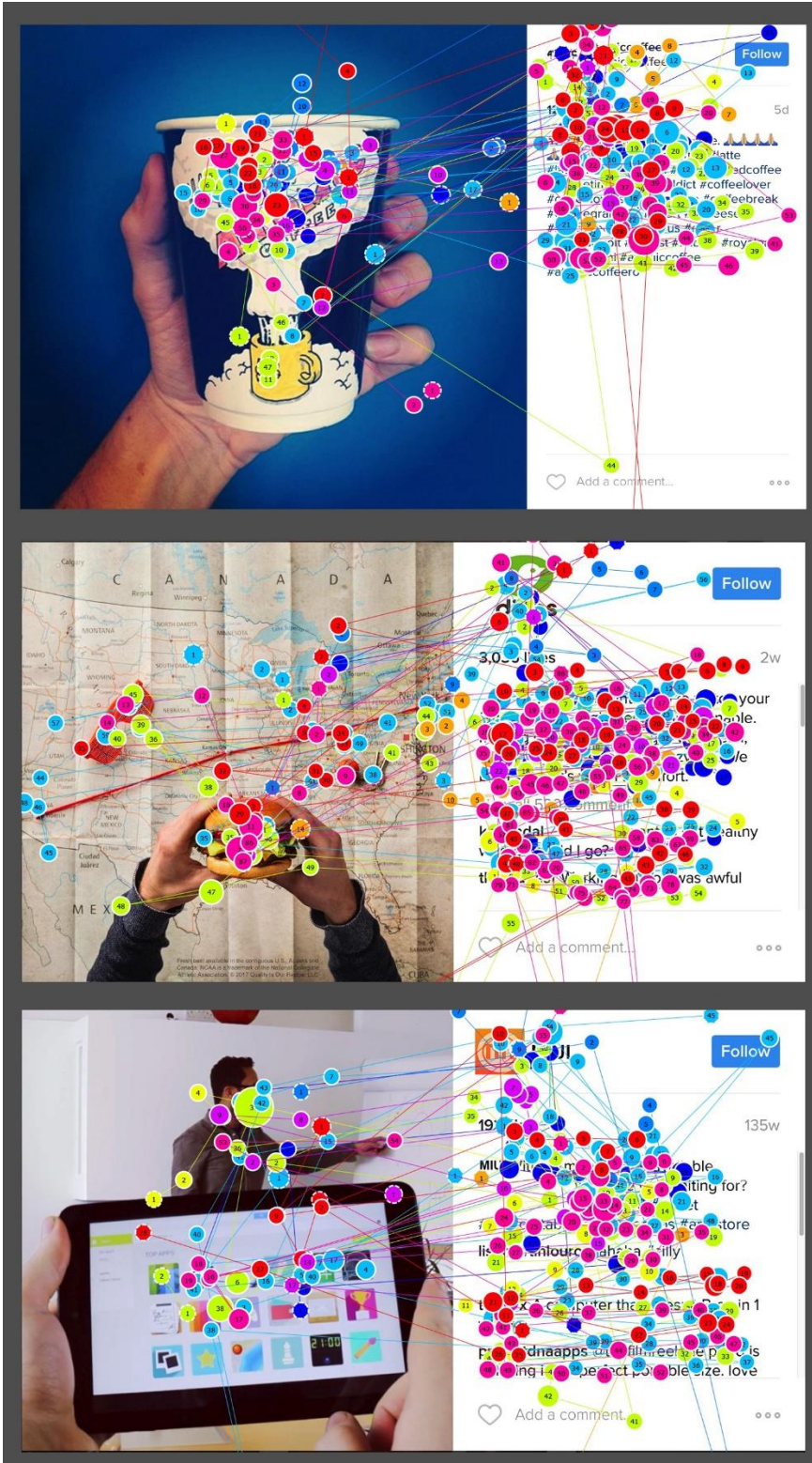


Figure 5. Gaze plot of AOI for first-person view product-centric condition.

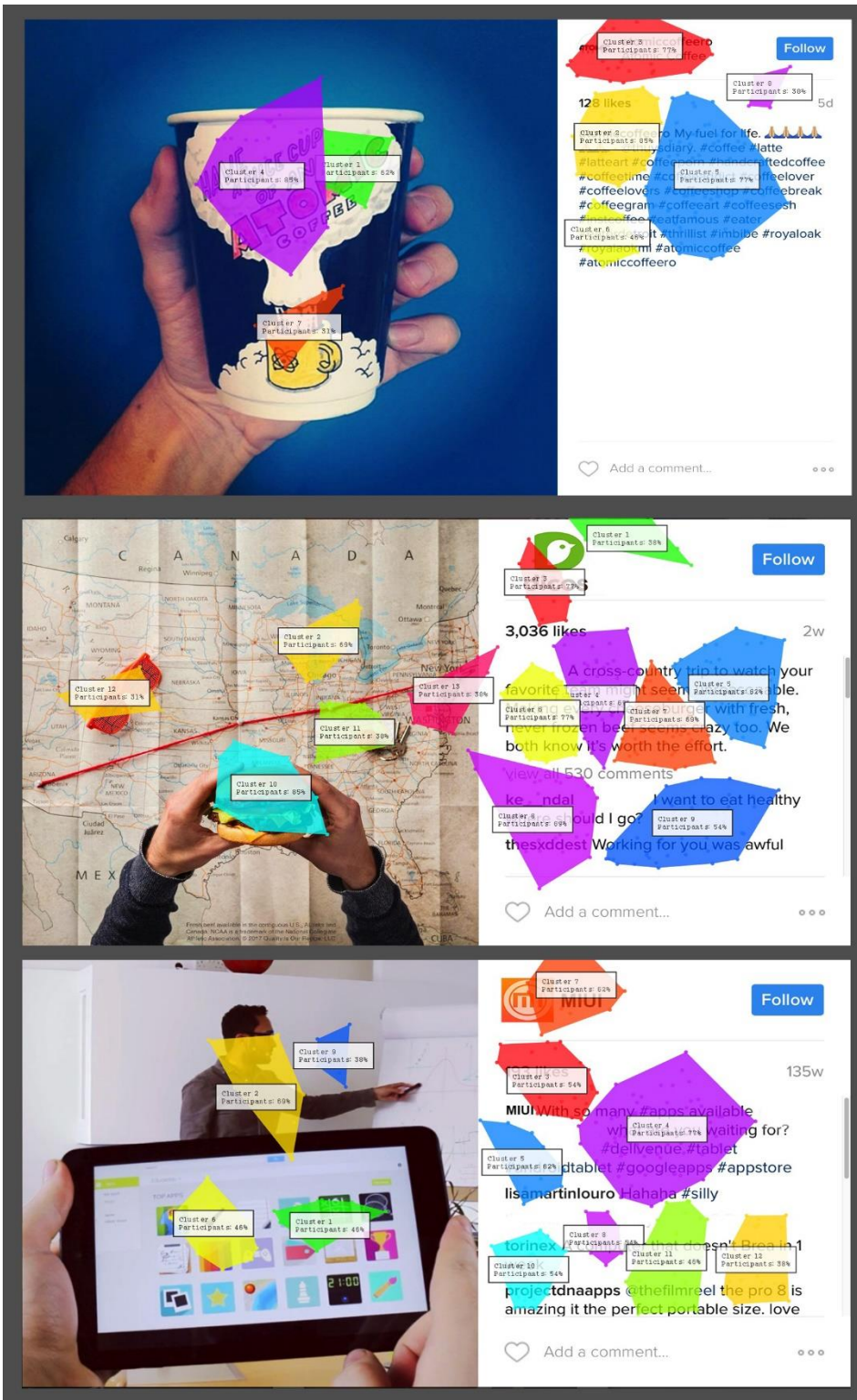


Figure 6. Cluster map of AOI with percentages for first-person view product-centric condition.

Another possible explanation is that some participants thought the branded Instagram post was just a new form of advertising and no different from the ads on TV or in newspapers. In their answers to an open-ended question at the end of the experiment, many participants expressed neutral and even negative feelings towards the Instagram posts, which could also help explain the finding. Some comments include:

“Indifferent.”

“I have neutral feelings about the brands, they do not have any ads that I can really remember right off hand.”

“They exist.”

“I feel like they are ads and I don't pay much attention to ads.”

“I see the brands as only advertising. As I do not follow Instagram, I have no feelings toward it. I would not get an Instagram based on this study.”

“I have no strong feelings about these brands and their Instagram posts. Social media is a great way to post ads and these companies chose Instagram to reach the audience.”

The participants who did not care about any types of advertising may have simply ignored and intentionally overlooked any brand content or ads on media in their daily lives. Such attitudes and behaviors cannot be changed by simply increasing or decreasing the length of exposure time to and frequency of brand appearance on Instagram.

Effects of Visual Elements

Consistent with previous studies on UGC, results of the current study showed that customer-centric Instagram posts generated more favorable brand image and brand love

than the other three themes. As mentioned before, Instagram and other online media provide two-way interactive communication platforms for users to co-create brand image with organization, self-organize the brand content (although still under controlled by organization), share post-purchase moments with other consumers, and self-express ideas in the brand community (Christodoulides, Jevons, & Bonhomme, 2012). Not surprisingly, Instagram users prefer to see the user-generated content about their own lifestyles, experiences, and evaluations rather than the stories of products and organizations. Moreover, studies on advertising (e.g., Becker-Olsen, 2003; Harvey, 2001; Tutaj & Van Reijmersdal, 2012) suggest that a brand behind the sponsorship of event or content (such as native advertising and sponsored content) could generate more interests toward the brand than the traditional ads (such as banner ads and pop-up ads). This is also the reason that product-centric Instagram posts had the less positive brand images and brand love than other three story-based posts in this study.

In this study, participants showed a clear preference to the third-person view pictures in attitude toward brand, brand love, and the three dimensions of brand image over the first-person view pictures. This may be because of the participants' Instagram viewing habits. As many industrial reports suggest (e.g., Benjamin, 2016; Barbosa, 2016; Sigmon, 2015), most users were checking their Instagram updates on mobile devices during short amounts of free time (such as waiting, eating or taking break). A third-person view image is able to show the whole story quickly and clearly and is also more convenient to be read and organized on smartphone or tablet with limited screen (Bateman et al., 2011).

In line with the findings in the eye-tracking tests of this study, first-person view can be used not only for catching viewers' attentions, but also effective for enhancing attitude toward brand, brand image, and brand love in customer-centric posts. On the other hand, the third-person view could be able to improve the brand attitude and brand love in customer-centric Instagram post. For marketing and advertising professionals who would like to conduct visual branding on Instagram, these findings suggested that Instagram post with different view perspectives could be helpful in generating stronger brand image and more positive brand attitude. However, there are no unchangeable rules for using view perspectives. It varies regarding to the content and visual themes of posts.

According to Roberts' (2005) lovemarks model, brand loyalty comes from a combination of high brand love and brand respect. As showed in this study, the visual themes and view perspectives had influences on brand love and brand images. However, there were no main or interaction effects among four visual themes and two view perspectives on participants' brand respect in this study, which means visual designs and strategies themselves were only able to influence participants' brand love, but not to effect their brand respects. Yet, brand respect can be partially effected by visual design when individuals had different levels of personal relevance to the brand and had different amount of previous knowledge to a brand (brand familiarity), which will be discussed in the following section.

Moderating Effects of Personal Relevance

Findings suggest personal relevance moderated the effects of visual themes and view perspectives on attitude-toward-the-brand, brand love, brand respect, and the three

dimensions of brand image. For the high relevance brand, customer-centric post generated more favorable attitude-toward-brand, more brand love, stronger brand respect, and more positive brand image in all three dimensions than the other three visual themes. For the low relevance brand, posts without brand identifications led to more brand love than employee-centric images. According to ELM (Park, Lee, & Han, 2007; Petty, Brinol, & Priester, 2007), higher personal relevance leads to higher level of elaboration, and individuals tend to be more motivated to process the persuasive message. In the current study, consumer-centric post provide the most object and useful reactions and feedbacks from consumer visually about the post-purchase moment and lifestyle with the product, and the love of brand. In comparison, product-centric post seems over pushed the viewers for buying the products. Employee-centric posts and the posts without brand identification only showed viewers the indirect stories or emotional moment. It may be helpful to catch attention, but not be informative. In comparison, it is possible that the information provided by customer-centric Instagram post for the high personal relevance brand met viewers' needs the most.

Contrarily, low personal relevance results to less elaboration and motivation to process the visual message (e.g., Kaufman, Stasson, & Hart, 1999; Petty, Brinol, & Priester, 2009). Under a low-personal relevance mode, an Instagram post without brand identifications served as peripheral cue are more touchable and acceptable than product- and employee-centric post. In addition, one of the reason that employee-centric image received the lowest brand love is that the experiment design in current study selected the most common types of products as stimulus in both Study 1 and Study 2 such as tax

return service, fast food, and computer sells in order to ensure every participant understands what products and brands the Instagram posts were promoting. Working in these industries are usually considered low-income jobs and many students had negative experiences as part-time employees in such areas. In organization side, most of employee-centric Instagram posts were about showing the happy lives and emotional moments their employees have had. As a result, participants' negative attitudes may be recalled during the experiment when they were viewing such posts. Comments from some participants in the current study also indicated similar attitudes.

“They seem to be pleasant in nature, but also a bit staged. I find it hard to believe people are that happy consistently during a given work day. Definitely deliberately trying to push an image”

“A lot of people use Instagram for branding but I believe it can be ‘iffy’ sometimes.”

Therefore, for marketing professionals who would like to adopt employee-centric post for branding on Instagram, this study suggested that telling an emotional story about employees is a traditional branding strategy and gets marketing success (e.g., Epstein, 2016; Sebastian, 2007; Welch, 2011). However, an over-staged image may cause negative and unrealistic feelings toward the brand. It is especially true for visual branding on Instagram when using employee-centric images.

Three-way interaction effects among visual themes, view perspective, and personal relevance were found in attitude toward brand. For the brand with high personal relevance, participants generated significantly more positive attitudes toward the brand

when participants saw the Instagram post with customer-centric images taken in the first-person angle. As discussed in earlier findings, the first-person view could reduce the visual distance between main subject and human eyes, and provide a stronger feeling of visual reality (Reeves & Nass, 1998). As suggested by ELM, under a high-personal relevance, Instagram users would use a high amount of thinking to process the message from Instagram post. Consumers, in this case, look for the most useful information by the most comfortable way. Thus, a customer-centric post with the first-person view is the most effective design under such a high personal relevance.

For the brand with low personal relevance, participants reported significantly more positive attitudes toward the brand when they viewed the post with product-centric images taken in the third-person angle and the post with employee-centric images taken in the first-person angle than any other experimental conditions with low personal relevance. Again, consumers would like to spend less time processing the information under low personal relevance. Both visual themes and view perspectives serve as peripheral cues. Apparently, first-person view reinforces the realistic and dramatic feelings of telling an employee's story. Accordingly, third-person view provides a more comprehensive landscape for showing a product.

Role of Brand Familiarity

The current study was in line with previous studies that found that the more familiar brand led more favorable attitude toward brand, stronger brand love, stronger brand respect, and more feelings of mystery and intimacy compared to unknown brands (e.g., Campbell & Keller, 2003; Kent & Kellaris, 2001; Srivastava & Kamdar, 2009).

Although familiar brands completed the first step of brand image building, which is the establishment of awareness (Srivastava & Kamdar, 2009), they only could give the strategic communicators a limited space to tell a new story and develop a creative branding activity (Alden, Steenkamp, & Batra, 1999). This is the reason the interactions of high brand familiarity, low personal relevance and third-person view post generated the least positive brand images and respect in this study. In addition, lack of establishment of brand awareness caused the result that the low personal relevance Instagram post with third-person view angle also generated the significantly less brand respect compared with any other situations when a brand was unfamiliar.

Three four-way interaction effects were found among visual theme, visual perspective, brand familiarity, and personal relevance. Based on the media equation model, first-person view had the shortest psychological distance between viewer and media content (Reeves & Nass, 1998). According to ELM, high personal relevance and high brand familiarity increased viewer's elaboration of processing the persuasive message (Park, Lee, & Han, 2007; Petty, Brinol, & Priester, 2007). The customer-centric theme was the basis of UGC and the most popular content on Instagram (Bryant, 2016). Not surprisingly, as the results of current study indicated, using the high personal relevance Instagram posts with first-person angle and customer-centric images to promote a familiar brand received the most favorable attitude, strongest brand respect, and strongest feeling of sensuality toward the brand in all experimental conditions.

On the other hand, using the low personal relevance Instagram posts with first-person angle and product-centric images to promote an unfamiliar brand received the

least favorable attitude, and weakest feeling of sensuality toward the brand in all experimental conditions. Using the high personal relevance Instagram posts with first-person angle and product-centric images to promote an unfamiliar brand resulted in the least brand respect in all experimental conditions.

For marketing and advertising professionals, these findings require a more in-depth understanding of personal relevance and brand familiarity among Instagram users, as well as its interaction with other factors such as visual theme and view perspective. Again, on the consumer side, processing the visual information from an Instagram post requires the interaction of visual units and intellectual units in human brain. Accordingly, on the organization side, visual language and design style do not work alone for visual branding on Instagram. A graphic designer must consider the influences of some pre-existed factors (such as brand familiarity and personal relevance in the current study) on viewers' reactions toward a brand when designing an Instagram brand post.

CHAPTER VII LIMITATION AND FUTURE RESEARCH

While the current study contributes to the overall understanding of brand constructions on Instagram, the following limitations should be considered for the future research. First, undergraduate students were used as samples. It is possible that people with different culture background and age have different reading habits, aesthetic beliefs, and communication styles. They may also have different levels of access on Internet and different frequencies of checking their social media accounts. A more diverse group of participants would be used for better understanding the effects of native advertising on individuals with different demographic backgrounds.

In addition, the current study only focused on two visual communication elements, visual theme and view perspective. Use of texts as title and caption on Instagram post should also receive additional research attention. While scholars have consistently found that social media have been used as visual communication platforms rather than text-based media, use of text may still be necessary for branding on the visual-based social media. Many text-created and edited features developed specifically for combining word, image, video, audio, and animation on a social media post. For example, “Instagram Stories” is a visual story editing feature on Instagram that allow user to insert picture or video to an articles and use makeup tools to mix the original story with additional text and drawings. “Snapchat Stories” has the same functions for Snapchat, another visual-based social media. In addition, an APP named “Overgram” was designed for Instagram users to quickly add the text with special effects, various typeface, font, and layout design style into their Instagram visuals (Ross, 2013). More

visual storytellers and graphic designers realized Adobe Typekit brings thousands of fonts for their visual design activities (Adobe, 2017). Future studies may explore more about what kind of brand information should be presented by words but not visuals on social media branding and the influences of negative and positive comments on Instagram post to viewers' attitude-toward-brand, brand love, and brand respect. By using a higher Hz eye-tracker with faster tracking speed (such as Tobii Pro TX300), the future research will be able to record individual's eye movement on both image and text message. It will be helpful to examine the interaction effects of visuals and texts on viewers' visual attentions and brand memory.

Moreover, during the eye-tracking experiment in the current study, the researcher noticed many participants checked how many "likes" the Instagram post had first instead of viewing the visual content. This suggests the number of "likes" is matter for visual storytelling on Instagram, especially for catching attention. The future study could highlight the "likes" as an AOI and explore the relationship among the first fixation duration, first fixation frequency, and brand interests.

Finally, Instagram has become one of the most popular APPs for mobile devices. People check and update their social media pages on their smartphone or tablet more frequently than PC or laptop. The eye-tracking experimental setting of current study is a Tobii Pro X2-60 eye-tracker connected to a 17-inch monitor. The future study could directly set up the eye-tracker on a mobile device such as iPhone or iPad to increase the reality of experimental scenarios.

APPENDIX A – Sample Questionnaire

Screening Questions

1. Are you above 18 years old?

- Yes No (End of questionnaire)

Study one: Eye-tracking analysis

Attitude toward brand

(Q1) Do you think this brand is _____ (please circle a number)?

Bad	1	2	3	4	5	6	7	Good
Not Likable	1	2	3	4	5	6	7	Likable
Unfavorable	1	2	3	4	5	6	7	Favorable
Uninteresting	1	2	3	4	5	6	7	Interesting
Unappealing	1	2	3	4	5	6	7	Appealing

Study two: Psychological analysis of intellectual units

Brand familiarity

(Q2) Do you know this brand (please circle a number)?

Don't know it at all	1	2	3	4	5	6	7	Know it very well
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Personal relevance

(Q3) Do you think this brand is _____ (please circle a number)?

Unimportant	1	2	3	4	5	6	7	Important
Boring	1	2	3	4	5	6	7	Interesting
Mean nothing	1	2	3	4	5	6	7	Mean a lot
Worthless	1	2	3	4	5	6	7	Valuable
Not needed	1	2	3	4	5	6	7	Needed

Brand image: Mystery

(Q4) This brand awakens good memories for me

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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(Q5) This brand captures a sense of my life

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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(Q6) This brand comes to mind immediately when I want to purchase a _____product

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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(Q7) This brand captures the times

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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(Q8) This brand adds to the experience of my life

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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Brand image: Sensuality

(Q9) The design of this brand's Instagram post is really well done

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

(Q10) The well-ordered host social media appeals to me

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

(Q11) This brand has incredible displays

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

(Q12) This brand has a beautiful visual appearance

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

Brand image: Intimacy

(Q13) I feel happy when I use this brand

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

(Q14) I have solid support for this brand

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

(Q15) I like looking at the products of this brand

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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(Q16) I feel connected to this brand

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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(Q17) I would stay with this brand

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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Brand love:

(Q18) I love this brand

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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(Q19) This brand is a pure delight

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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(Q20) This brand makes me feel good

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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(Q21) This is a wonderful brand

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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Brand respect

(Q22) I respect this brand

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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(Q23) This brand is honest to me

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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(Q24) This brand communicates well with me

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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(Q25) This brand is responsible to me

Strongly disagree	1	2	3	4	5	6	7	Strongly agree
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Demographic information:

26. *What is your gender?*

Male

Female

27. *What is your age?*

28. *How often do you check your Instagram every month?*

29. *Overall, How do you think about branding in Instagram?*

APPENDIX B – IRB Approval Letter



INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
Phone: 601.266.5997 | Fax: 601.266.4377 | www.usm.edu/research/institutional.review.board

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 16121401

PROJECT TITLE: Perfectly Imperfect Effect: How the Visual Communication Strategies, Brand Familiarity, Product Involvement, and Individuals' Motivations Influence Visual Attention and Brand Constructs on Instagram

PROJECT TYPE: New Project

RESEARCHER(S): Lijie Zhou

COLLEGE/DIVISION: College of Arts and Letters

DEPARTMENT: School of Mass Communication and Journalism

FUNDING AGENCY/SPONSOR: N/A

IRB COMMITTEE ACTION: Expedited Review Approval

PERIOD OF APPROVAL: 01/04/2017 to 01/03/2018

Lawrence A. Hosman, Ph.D.

Institutional Review Board

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