

ANTHROPOMORPHIC STIMULI IN BRAND DESIGN: THE EFFECT OF HUMAN FACE SCHEMA

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ABSTRACT

Numerous studies claim that creative designers and advertisers often use anthropomorphism as a marketing tool for evoking emotion, facilitating interaction and influencing consumer's buying decision. Brand names such as KFC, Michelin and M&M earn recognition and popularity due to human characteristic embedded in its logo design. In spite of this, it is unclear what kind of anthropomorphic stimuli that can effectively engage consumers and establish relationship. Hence, we hypothesize that viewers would be more responsive towards symbols that imitates human characteristic. To test this, a visual preference survey was conducted. Based on a scale of 1 Not Familiar to 5 Extremely Familiar, one hundred and nineteen ($n=119$) participants rated fifteen (15) types of graphic symbol (made of circle, square, triangle, line and dots) which have been embedded with anthropomorphic stimuli. Findings of the study identify several graphic symbols with familiar anthropomorphic stimuli have the ability to influence judgment on visual appeal and acceptance.

Key Words

Anthropomorphism Stimuli, Logo Design

INTRODUCTION

A brand design like logo or trade symbols can be defined as a communication tool, which is essential for advertisers and marketers to distinguish, convince, disseminate message and reflect company's good image. According to Henderson and Cote (1998) a typical brand design, which normally contains graphic elements such as symbol, icon, typography and images serve none other than to create strong identity for acceptance. This is to ensure that the brand design will be able to prolong recognition and ultimately influence consumer's buying decision. Nevertheless how can a brand design promote itself? Scholar believes that it should all begin at the design stage. According to De Chernatony (2006) the design of a brand should not be tactically but strategically well-thought-out. In other words the designer should carefully exploit all kinds of design options (colour, fonts, shape, lines, etc.) so that the final outcome will expose "the core essence of the nature of the brand" (Chernatony, 2006). In conjunction, certain Malaysian brand design such as PETRONAS, AirAsia, Malaysia Airline and Proton are already recognized internationally. This recognition, in a way, illustrates the degree of importance for creative designer and marketer to give serious attention to the detail artwork and communicative aspect of the brand design before releasing it to the public. In addition to this, some researchers have recognized the use of anthropomorphism to evoke emotion, facilitating interaction and influencing consumer's buying decision. Studies by Waytz, Cacioppo and Epley (2014) suggests that marketers should consider anthropomorphism because it will establish

empathic connection with non nonhuman agents, for judgments of responsibility and culpability, and for creating social influence. Rauschnabel and Ahuvia (2014) state that anthropomorphism is essential in brand marketing. They believe that the more consumer perceive anthropomorphism in a brand, eventually they will develop intimate relationship, trust and loyalty. This phenomenon is referred as brand love. They concluded by identifying four promising ways that can increase perceived anthropomorphism in a brand, 1. Communicate in the first person, 2. Use of stimuli that imitate human characteristic, 3. create a strong brand personality and 4. interact through social media.

LITERATURE REVIEWS

Anthropomorphism is a natural tendency, which enables audience to attribute human elements in animals and nonliving things (Guthrie,1995). Anthropologists posit that this thought may have been originated from animism which is a belief that all things have a spirit or soul, legend, and the need to have visual images of gods. Thus many ancient religions and myths depict deities in dual bodies, half human and half beast. In Hinduism, lord Ganesh is portrayed as the elephant headed god whereas in ancient Greek mythology, the Centaur is depicted a half man and half horse creature. Many people also believe that Mother Nature is conscious and aware. For instance, prior to commencement of climbing expedition, the Sherpa would normally perform a ritual called Puja to seek blessing from the mountain spirit. Aside from religion, anthropomorphism is also encountered in everyday event, for example believing that some pet animals (dogs, cats, bird, etc.) have characteristic and behavior similar to human, describe the effect of anthropomorphism in social context (Chartrand, Fitzsimons & Fitzsimons, 2008). Why do humans anthropomorphize? In *Beyond the Brain: How Body and Environment Shape Animal and Human Minds*, Barrett (2011) suggests that since humans possess unique qualities, it is tempting not to resist attributing ourselves to other beings. In *On Seeing Human: A Three-Factor Theory of Anthropomorphism*, Epley, Waytz, and Cacioppo (2007) propose three factors involving cognitive and social determinants. These factors are Sociality, Effectance and Elicited agent Knowledge (SEEK). Sociality is defined as the demand to establish social connections with other humans. Effectance involves the drive to communicate effectively with nonhuman subjects. Elicited agent Knowledge refers to the notion that knowledge about humans is likely to serve as the basis for anthropomorphism since it is readily accessible at the time of judgment. In addition to the theories as discussed earlier, we suggest that anthropomorphism perception may also due to our inquisitive nature. As human, we are always curious about certain unfamiliar phenomenon. For example some people believe that a crop circle phenomenon (a symbol found on crop field) is linked with extraterrestrial event. Hence we often make assumption by referring to our own understanding, experience, culture and also beliefs. Consider the following analogy. When our neighbor's dog barks ferociously, immediately we would think that something is wrong or someone is in danger. Perhaps there is a stranger standing in front of the house or maybe a burglar trying to break in. At this point usually, we would be able to predict the event and 'see' the person. How do we explain this phenomenon? Subconsciously, our mind attempts to evaluate the situation and relate it to social means such as entreaty or threat. The barking sound triggers our anthropomorphism sense, which in return influences our final judgment or action. Contrary to the notion, which regards anthropomorphism as a spontaneous reaction, some scholars argue that it can also be intentional. For example, University of Minnesota has developed a life like mannequin, which will be used for training military medics. According to Dr Robert Sweet, associate professor of urology and director of SimPORTAL, the mannequin is designed for the purpose of simulation training, as it will give the medics better exposure before they experience it in a real life situation. A study by Choi, Miracle & Biocca (2001) states that "When a user interacts with a human-like virtual agent, talking and moving in a vividly simulated audio-visual environment, more sensory cues will be involved and perceived by the users. Such an interaction will lead to a higher degree of telepresence than if no agents were present. Also, it is expected that a higher degree of social presence will be conveyed as the user interacts with an agent capable of both verbal and nonverbal cues".

In regards to brand design, many researchers have been acknowledging anthropomorphism for its capability in positioning a brand, prolonging recognition and persuading consumer to make purchase decision. In this sense, the creative designers and marketers are responsible for developing an image or personality to induce the consumers. A study by Hosany, Prayag, Martin and Wai-Yee Lee (2013) shows that Sanrio's lovable anthropomorphic character Hello Kitty earns a special place in consumers' heart worldwide. Sanrio has been persuading Hello Kitty fans to stay loyal to the brand even in adulthood. Apparently, according to Hosany et al., (2013) this is achieved through strategic marketing program which integrates character licensing, third-party collaboration, capitalizing on nostalgia, product-line extensions, brand extensions, sustaining consumer interests, and harnessing technology (Hosany et al., 2013). In addition, he also states that Sanrio employs a unique marketing tactics by ensuring that the appearance of Hello Kitty is kept simple, cute and innocence. Ethologist scholar, Konrad Lorenz refers this factor as baby schema (Kindchenschema) which is a set of infantile physical features such as the large head, round face and big eyes that is perceived as cute and motivates caretaking behavior in other individuals (cited in Glocker, Langleben, Ruparel, Loughhead, Gur, & Sachser, 2009). The following discussions present some case studies of popular brand design that uses anthropomorphic stimuli (shape, line, dots and type) to communicate value and establish relationship with consumer.

Case Study of LG



Fig. 1

Founded in South Korea in 1947, LG is one of the world famous household brand names for electronic appliances. Unlike other competitors like Sony and Mitsubishi, LG brand is distinctively unique due to its anthropomorphic feature. Using only limited geometric shape, lines and typographic elements, LG brand is specifically designed to symbolize the world, future, technology youth and humanity. LG brand is constructed using typographic elements. A letter 'G' is used as a profile outline of a human face while a letter L is placed inside the letter G which apparently resemble a nose. A small dot, which represents an eye, is added to make it appear more recognizable. However LG brand design does not refer to any specific gender. Despite this, the anthropomorphic stimuli in LG brand are outstanding thus allowing viewers to identify and link it to value and quality.

Case Study of Amazon



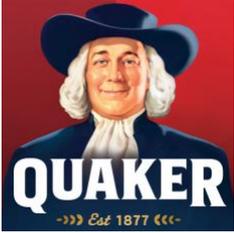
Fig. 2

Amazon is an American electronic commerce and cloud computing company. The company was founded by Jeff Bezos in 1994. Overall Amazon logo can be classified as typographic. What is interesting about Amazon logo is that it seems to be smiling at us. This is noticed through the "smiley

arrow” positioned beneath the word amazon. According to the designer, Turner Duckworth (cited in Berman, 2014) the so-called smiley arrow beneath “Amazon” actually carries a hidden message. It begins at “a” and ends at “z,” emphasizing that the company carries absolutely everything “from A to Z.” In spite of what the designer intended it to be, the logo has successfully attract audience’s attention thus making the company feel friendly and approachable. Table 1 provides a list of international brand names that contains anthropomorphic stimuli.

Table 1

No	Logo	Company description
1		<p>Kumon is a private tutoring lcenter founded by Tori Kumon from Osaka, Japan.</p>
2		<p>PBS is an American public broadcaster and television program distributor.</p>
3		<p>Mac Os is an operating system from Apple incorporated</p>
4		<p>Starbuck is an American coffee company and coffeehouse chain</p>
5		<p>CBS is an American television broadcast company.</p>

6		<p>Android is a mobile operating system (OS) currently developed by Google</p>
7		<p>KFC is an American fast food restaurant.</p>
8		<p>The Quaker Oats Company is an American food conglomerate based in Chicago.</p>
9		<p>Pringles is a brand of potato- and wheat-based stackable snack chips owned by the Kellogg Company.</p>
10		<p>Wella is a major German hair care company headquartered in Geneva, Switzerland.</p>

PROBLEM STATEMENTS

In *Is That Car Smiling at Me? Schema Congruity as a Basis for Evaluating Anthropomorphized Products*, Aggawarl and McGill (2007) measure the common form of anthropomorphism to see whether or not the human facial feature in a car is plausible. In order to conduct this study, the researchers showed 42 participants a picture of the front of a car that was modified using digital imaging software to mimic human facial expression of a smile and a frown. Next they asked the participants to evaluate the car's new look by referring to a two-item measure on the extent to which the car was seen as human (had come alive, like a person). From this, they discover that the participants have the tendency to perceive the car as a person and evaluate it more positively when

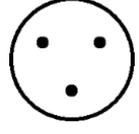
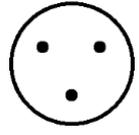
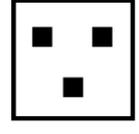
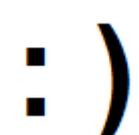
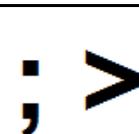
the target feature was more congruent (smiling) than less congruent (frowning). Masahiro Mori (1970) a Japanese professor of robotic suggests a hypothesis called “The Uncanny Valley” which specifically measures audience’s emotional response towards a robot. He states that if a robot appears more human, there is a tendency that the observer's' emotional response to the robot will become positive and empathic. However if the appearance of the robot reached a point that is virtually indistinguishable from the real thing (human), thus the response quickly changes from positive to that of strong revulsion such as petrify or eerie. However, as the robot's appearance continues to become less distinguishable from that of a human being, the emotional response becomes positive once again and approaches human-to-human empathy levels. Although there are many studies concerning anthropomorphism, surprisingly no systematic measure has been employed to investigate the effectiveness of anthropomorphic stimuli in brand design. Anthropomorphic stimuli are useful for establishing connection between the product and the consumer. It plays a role as a mediator which enable consumers identify the brand in order to build relationship and loyalty. In this regard, we believe that anthropomorphic stimuli should be exploited and integrated in brand design in order to enhance its personality. In this regard, the present study hypothesizes that viewers will favor a brand design that possesses familiar anthropomorphic stimuli than that of unfamiliar ones. Hence the following question is posed, what kind of anthropomorphic stimuli that might offer the best persuasive ability?

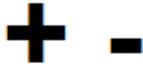
METHODOLOGY

This study has adopted and improvised a unique visual analysis approach called Visual Preference Survey (VPS). VPS is a common measurement tool used by researcher in town and urban planning to obtain public view about a place, town, residential area and parks (Silberstein & Maser, 2013). Basically it requires participants to observe a picture of a subject and then rate it based on a preference scale depending on how well he or she likes or dislikes. Before this task can be carried out, some alterations were done to conform to the research subject. Instead of using existing image, we created fifteen (15) graphic symbols consisting circles, squares, lines and dots. These symbols contain anthropomorphic stimuli that imitate human characteristic particularly on face area. Using a five point rating instrument ranging from 1. Not Familiar to 5 Extremely Familiar, one hundred and nineteen (n=119) undergraduate students participated in the survey. In general, the survey instrument contains fifteen multiple symbols (15) which the respondents will need to evaluate and rate each of them based on the preference rating scale. Table 2 provides the detail of the instrument that includes category, sample code, symbols and description.

Table 2

Category	Sample Code	Symbols	Description
A. Symbol that imitates human face	A1		3 small dots in a circle
	A2		2 small dots in a circle
	A3		1 small dot in a circle

B. Symbol imitates human eyes	A4		3 big dots crowding in a circle
	A5		3 small dots placed in the center of a circle
	A6		3 small dots placed near the outer ring of a circle
C. Symbol that imitates robot face	A7		3 small dots in a circle
	A8		3 small squares in a big square
	A9		3 small triangles in a big triangle
D. Symbol that suggests a smile	A10		Half circle line
	A11		Short horizontal line
	A12		Short diagonal line
E. Symbol that evoke emotional meaning	A13		A colon ":" and close bracket ")" symbol
	A14		A semi-colon ";" and greater than ">" symbol

	A15		A minus "-" and a plus "+" symbol"
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RESULTS & DISCUSSION

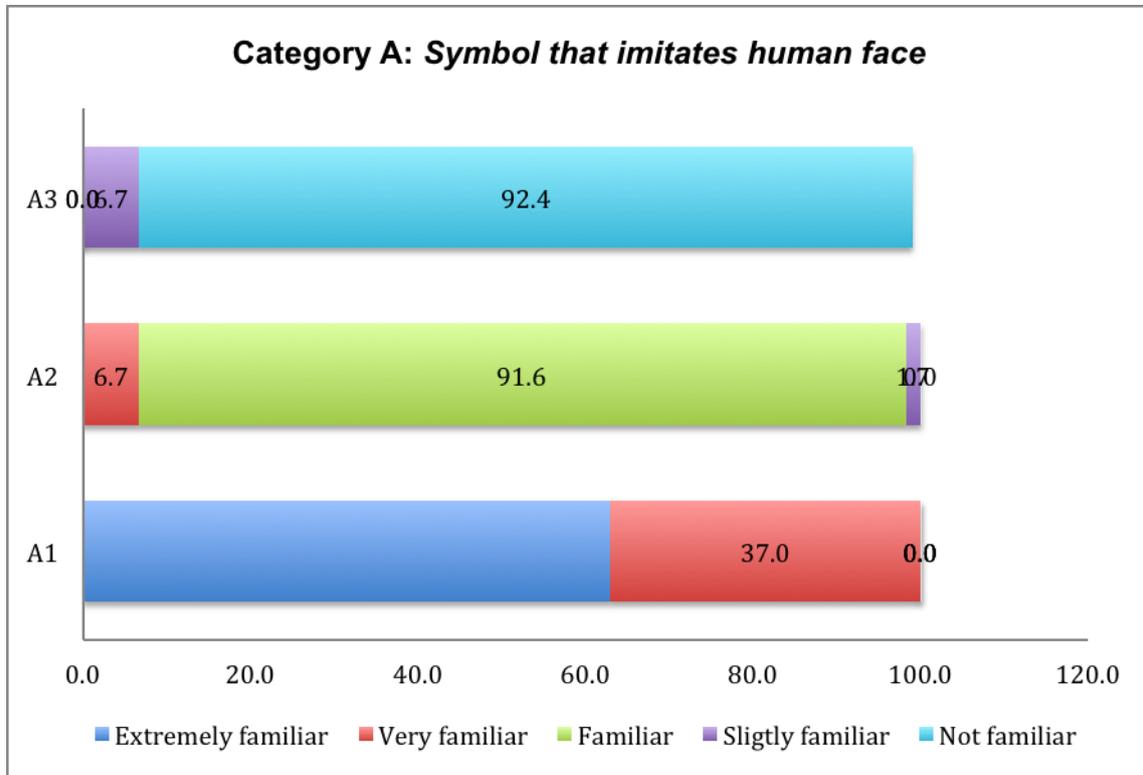


Fig. 3

Figure 3 displays the result for Category A: *Symbol that imitates human face*. As shown in the graph, sample A1 (3 small dots in a circle) indicates a score of 63% Extremely Familiar, 37% Very Familiar, 0% Familiar, 0% Slightly Familiar and 0% Not Familiar. Sample A2 (2 small dots in a circle) indicates a score of 0% Extremely Familiar, 6.7% Very Familiar, 91.6% Familiar, 1.7% Slightly Familiar and 0% Not Familiar. Sample A3 (1 small dot in a circle) indicates a score of 0% Extremely Familiar, 0% Very Familiar, 0% Familiar, 6.7% Slightly Familiar and 92.4% Not Familiar. Table 3 below provides the result of frequency of familiarity for this category.

Table 3 Frequency of Familiarity (Category A: *Symbol that imitates human face*)

Symbol Code	Description	Not Familiar to Slightly Familiar (< 3)	Percentage	Familiar to Extremely Familiar (>2)	Percentage
A1	3 small dots in a circle	0	0	119	100
A2	2 small dots in a circle	2	1.7	117	98.3
A3	1 small dot in a circle	119	100	0	0

Based on this result, it could be suggested that the respondents have the tendency to choose sample (graphic symbol) that depicts common human face schema. As observed in sample A1, the two small

dots at upper level can be easily attributed as two eyes whereas a dot at lower level is interpreted as a mouth even though all of the dots are all identical. The circle, which encloses the three dots could be interpreted as a head thus completes a face. In relation, respondents are also responsive towards the anthropomorphic stimuli in sample A2. The two dots are easily associated with eyes even without the third dot at lower level. In sample A3, majority of the respondents rate it lower probably because they could not attributes human characteristic since it only shows a single dot in the center. This finding in a way conforms that basic elements namely dots and circle can be manipulated to entice audience.

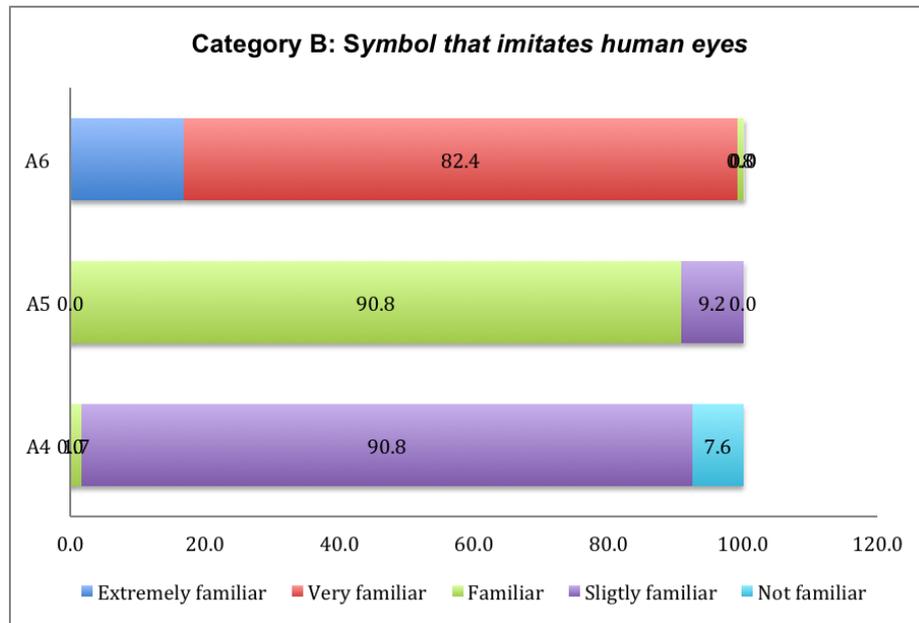


Fig. 4

Figure 4 indicates the result for category B: *Symbol that imitates human eyes*. As shown in the graph, sample A4's scores (3 big dots crowding in a circle) are 0% Extremely Familiar, 0% Very Familiar, 1.7% Familiar, 90.8% Slightly Familiar and 7.6% Not Familiar. Sample A5's scores (3 small dots placed in the center of a circle) are 0% Extremely Familiar, 0% Very Familiar, 90.8% Familiar, 9.2% Slightly Familiar and 0% Not Familiar. Sample A6's scores (3 small dots placed near the outer ring of a circle) are 16.8% Extremely Familiar, 82.4% Very Familiar, 0.8% Familiar, 0% Slightly Familiar and 0% Not Familiar. Table 4 below provides the result of frequency of familiarity for this category.

Table 4 Frequency of Familiarity (Category B: *Symbol that imitates human eyes*)

Symbol Code	Description	Not Familiar to Slightly Familiar (< 3)	Percentage	Familiar to Extremely Familiar (>2)	Percentage
A4	3 big dots crowding in a circle	117	98.3	2	1.7
A5	3 small dots placed in the center of a circle	11	9.2	108	90.8
A6	3 small dots placed near the outer ring of a circle	0	0	119	100

As observed in sample A4, majority of the respondents rate the symbol low in terms of familiarity of perceived anthropomorphism. This is probably because the symbol looks incongruous due to the size of the dots, which does not represent human eyes. Hence, the size of the eyes is crucial for viewer to sense anthropomorphism. On the other hand, sample A5 is much more familiar in terms of human characteristic. Hence this result concludes that basic shapes such as circle and dots are one of the important elements of anthropomorphic stimuli that can attract attention.

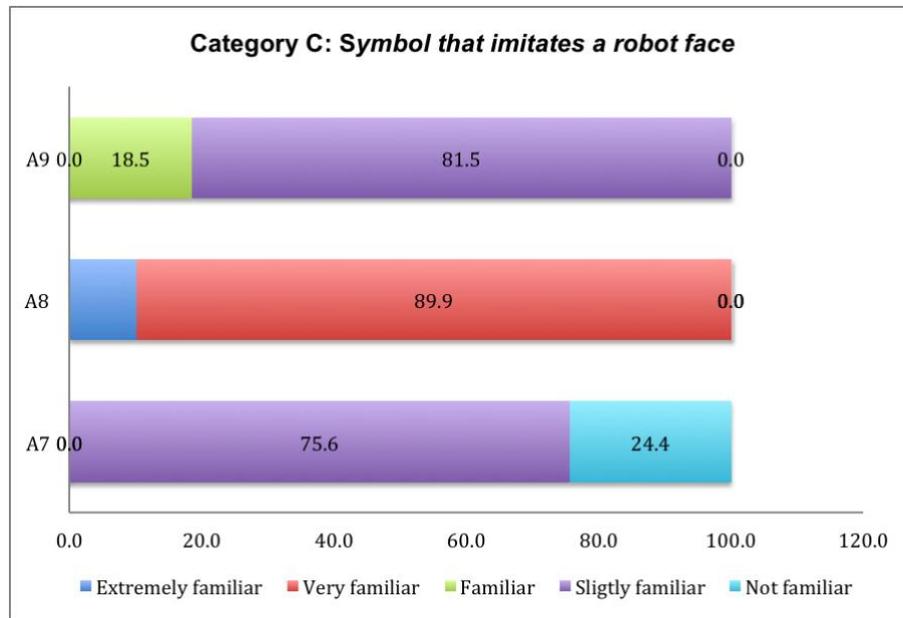


Fig. 5

Figure 5 indicates the score of category C: *Symbol that imitates a robot face*. As shown in the graph, sample A7 (3 small dots in a circle) scores 0% Extremely Familiar, 0% Very Familiar, 0% Familiar, 75.6% Slightly Familiar and 24.4% Not Familiar. Sample A8 (3 small squares in a big square) shows the score of 10.1% Extremely Familiar, 89.9% Very Familiar, 0% Familiar, 0% Slightly Familiar and 0% Not Familiar. Sample A9 (3 small triangles in a big triangle) shows the score of 0% Extremely Familiar, 0% Very Familiar, 18.5% Familiar, 81.5% Slightly Familiar and 0% Not Familiar. Table 5 below provides the result of frequency of familiarity for this category.

Table 5 Frequency of Familiarity (Category C: *Symbol that imitates a robot face*)

Symbol Code	Description	Not Familiar to Slightly Familiar (< 3)	Percentage	Familiar to Extremely Familiar (>2)	Percentage
A7	3 small dots in a circle	119	100	0	0
A8	3 small squares in a big square	0	0	119	100
A9	3 small triangles in a big triangle	97	81.5	22	18.5

As predicted, majority of the respondents give a higher score for sample A8. One of the reasons is that the square shape seems to resemble a robot face more than a human. In conjunction, sample A9 is also perceived as a robot face due to its incongruous appearance.

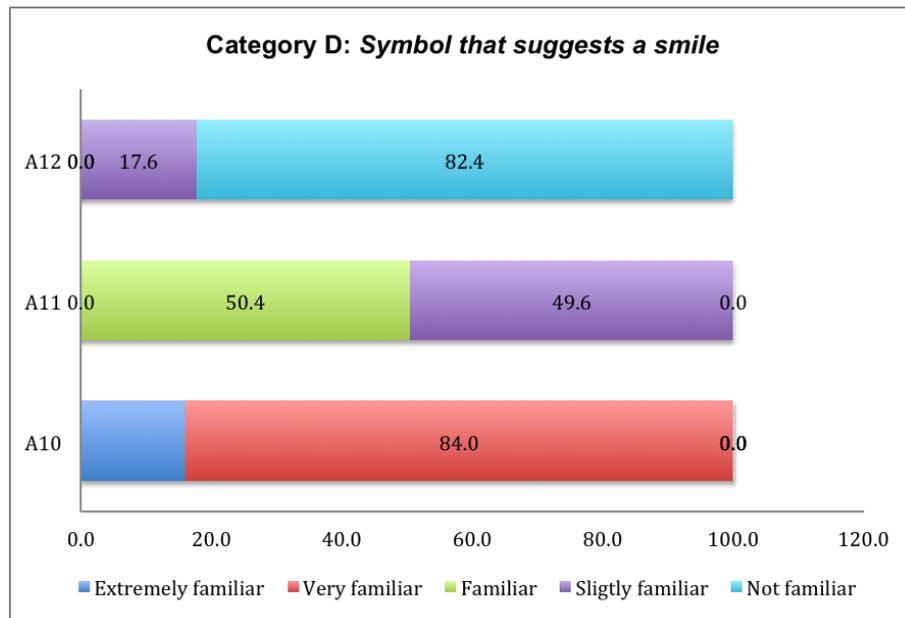


Fig. 6

Figure 6 indicates the score of Category D: *Symbol that suggests a smile*. Sample A10 (half circle line) shows the score of 16% Extremely Familiar, 84% Very Familiar, 0% Familiar, 0% Slightly Familiar and 0% Not Familiar. Sample A11 (short horizontal line) shows the score of 0% Extremely Familiar, 0% Very Familiar, 50.4% Familiar, 49.6% Slightly Familiar and 0% Not Familiar. Sample A12 (short diagonal line) shows the score of 0% Extremely Familiar, 0% Very Familiar, 0% Familiar, 17.6% Slightly Familiar and 82.4% Not Familiar. Table 6 below provides the result of frequency of familiarity for this category.

Table 6 Frequency of Familiarity (Category D: *Symbol that suggests a smile*)

Symbol Code	Description	Not Familiar to Slightly Familiar (< 3)	Percentage	Familiar to Extremely Familiar (>2)	Percentage
A10	Half circle line	0	0	119	100
A11	Short horizontal line	59	49.6	60	50.4
A12	Short diagonal line	119	100	0	0

In this category, we discover that there is a strong acceptance on symbol that suggests a smiley expression. As shown in the result, sample A10 featuring a half circle line is perceived as a smiley line even there is no indication of eyes or face feature. In sample A11, it seems that the respondents have mixed judgment whether or not a short horizontal line can be interpreted as an expression of a mouth.

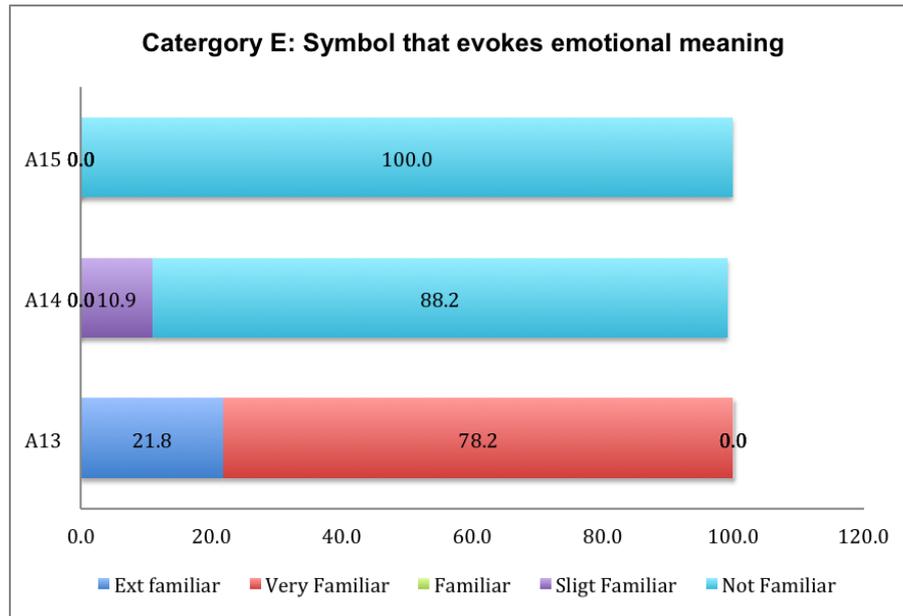


Fig.7

Figure 7 indicates the score of Category E: *Symbol that evokes emotional meaning*. As shown in the graph, A13 (A colon " : " and close bracket ")") scores are 21.8% Extremely Familiar, 78.2% Very Familiar, 0% Familiar, 0% Slightly Familiar and 0% Not Familiar. Sample A14 (3 small squares in a big square) scores are 0% Extremely Familiar, 0% Very Familiar, 0% Familiar, 10.9% Slightly Familiar and 88.2% Not Familiar. Sample A15 (3 small triangles in a big triangle) scores are 0% Extremely Familiar, 0% Very Familiar, 0% Familiar, 0% Slightly Familiar and 100% Not Familiar. Table 7 below provides the result of frequency of familiarity for this category.

Table 7 Frequency of Familiarity (Category E: *Symbol that evokes emotional meaning*)

Symbol Code	Description	Not Familiar to Slightly Familiar (< 3)	Percentage	Familiar to Extremely Familiar (>2)	Percentage
A13	A colon " : " and close bracket ")") symbol	0	0	119	100
A14	A semi-colon ";" and greater than ">" symbol"	119	100	0	0
A15	A minus "-" and a plus "+" symbol"	119	100	0	0

As expected, sample A13, which features a colon and a close bracket is familiar among respondents. Categorized under punctuation symbol, the colon and the close bracket can also be seen as a pleasant smiley face. The fact is that this particular symbol is commonly found in social media, which is used to compliment a message and to give quick response. However, the drawback is that the smiley expression will not work if either the colon or the close bracket is not visible. In regards sample A14 and sample A15, it appears that neither one is perceived to be anthropomorphic.

CONCLUSION

A brand is a marketing agent that is mandatory in the commerce world. Hence the artwork and the communication aspect of a successful brand does not solely depend on visual appeal rather it will also need a motivational factor called anthropomorphism. In this study, we have conducted a survey to establish understanding regarding viewer's perception towards anthropomorphic stimuli in brand design. The results show that graphic symbols featuring familiar anthropomorphic stimuli are rated higher than those with less familiar anthropomorphism. In addition, we also discovered that majority of the respondent have the tendency to judge the graphic symbols emotionally. For example, one of the samples, which contains punctuation symbols, a colon and a close bracket, is rated higher by respondents. This is simply because the colon containing two dots is perceived as eyes whereas the close bracket is seen as a smile. We conclude that anthropomorphism is not only a natural perception but possesses the ability to enhance the visual appeal of brand design and establish relationship with consumer.

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