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Evaluating Trademark Design

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EVALUATING TRADEMARK DESIGN

A Thesis

Presented to

The Faculty of the Graduate Program in Human Factors/Ergonomics

San José State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

by

Katherine L. Spencer

May 2011

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The Designated Thesis Committee Approves the Thesis Titled

EVALUATING TRADEMARK DESIGN

by

Katherine L. Spencer

APPROVED FOR THE GRADUATE PROGRAM IN

HUMAN FACTORS/ERGONOMICS

SAN JOSÉ STATE UNIVERSITY

May 2011

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ABSTRACT

EVALUATING TRADEMARK DESIGN

by Katherine L. Spencer

Trademarks serve as visual representations of a company's name, product, or values. This research sought to determine the effect of the application of human factors principles and graphic design principles on trademark design. A computerized questionnaire was employed to investigate the emotional impact, comprehension, and recall of trademarks based on their type (typographic elements or graphic elements), their subject-content compatibility, and their adherence to human factors and graphic design principles. Trademark type had a significant effect on comprehension of trademarks but no significant effect on emotional impact or recall. Trademarks with high subject-content compatibility and trademarks that use visual metaphor resulted in significantly higher comprehension (as measured by ability to match trademark to company description), indicating that the graphic design community may want to consider utilizing graphics with high subject-content compatibility or visual metaphor if comprehension is determined to be an important focus during the trademark design process.

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Introduction

What is a trademark?

According to the legal definition of trademark in the United States, “The term **trademark** includes any word, name, symbol, or device, or any combination thereof (1) used by a person, or (2) which a person has a bona fide intention to use in commerce...to identify and distinguish his or her goods, including a unique product, from those manufactured or sold by others and to indicate the source of the goods...” (United States Code, Title 15, Chapter 22 - Trademarks, 1989). The key point in this legal description is that a trademark is a visual mark that may use any combination of letters and imagery to aid a company in differentiating itself from other entities.

The purpose of a trademark is to visually represent a person, company, or product, and trademarks should be designed to provide easy and definite recognition (Mollerup, 2007). How a trademark achieves this representation may come in many forms; trademarks can attempt to evoke the company’s name, the company’s product, or the company’s values. A trademark matrix was created by the author to classify trademarks by typographic and graphic content (Figure 1). This trademark matrix was inspired by a more complex model by Hans Weckerle (Weckerle, 1968). Weckerle’s original matrix can be found in Appendix B. In the discussion that accompanied the presentation of the original Weckerle matrix, the journal’s editor wrote,

“Since the mid-50s, there has been a gradual, but often entirely arbitrary move toward the use of abstract symbols for company recognition. These have almost always replaced figurative illustrations which, for all their limited value as information, had a humanitarian realism. Many of the new symbols have lost true symbolism in having nothing precise to say. Hans Weckerle’s classification has discovered a wide range of symbol sub-elements. By defining

the nature of individual symbols in a very precise way he makes possible a more functional approach to both the design and use of company symbols, for different kinds of organisation and different purposes. Until now, there has been no attempt to make an exact classification in this field.” (Hughes-Stanton, 1968, p. 240)

The purpose in creating the trademark matrix was to help in the identification and classification of trademark types. The matrix first divides trademarks into two major groups — typographic (text-based) and graphic (image-based). Typographic trademarks can be further divided into logo-type (where the name of the company is used as the trademark) and abbreviation (where an abbreviation of the name of the company is used as the trademark). Graphic trademarks can be sub-divided into three categories, based on if the imagery is used to represent the name, product, or values of the company.

The classification of trademarks is made more difficult because trademarks may fall into one of more of the categories presented in the matrix. The matrix (Figure 1) shows examples of trademarks that fall into one or two category types. In addition to trademarks falling into more than one category types, well designed trademarks often have multiple layers of meaning. To achieve this goal of multiple layers of meaning, the trademark must describe the company in some way and create an association for the user (Mollerup, 2007), as well as be visually appealing. Not all trademarks achieve this goal of multiple layers of meaning. Poor graphic design or unintended interpretations can undermine the message of the trademark. In order to examine a trademark’s success in presenting its message, we can look at the purpose of the trademark and the purpose of the trademark’s imagery.

What purpose does the trademark serve?

Some trademarks must be recognizable from a great distance, like fast food establishments or gas stations competing for customers exiting a freeway. Other

5x5 Matrix of Types of Trademarks		Typographic:		Graphic:		
		Logo-type	Abbreviation	Name-oriented	Product-oriented	Value-oriented
Typographic:	Logo-type
	Abbreviation
Graphic:	Name-oriented
	Product-oriented
	Value-oriented

Figure 1. Proposed matrix of trademark types inspired by Weckerle (1968) original taxonomy.

trademarks must appeal to specific demographic segments, like the trademark for Avid or the South Asian Heart Center (Figure 2). Avid, a company that creates audio and video editing software, uses the icons for volume up, volume down, pause, and play to spell out their name. The South Asian Heart Center combines the symbology of the lotus flower and the heart to describe their clients and mission. These trademarks may not be widely known outside of their target audience, and their symbology may not be widely understood, but they strive to give their targeted audience a greater feeling of group inclusion by using imagery familiar to their users.

The Red Cross, the Red Crescent, and the Red Crystal are used in different parts of the world to represent, what is known in the United States, as the Red Cross. The Red

Figure 2. Examples of trademarks designed or altered for specific population segments.

Cross, which has a trademark considered iconic in the United States, alters its symbology from a cross to a crescent in many parts of the world to avoid unintended associations with Christian symbology. An alternative design, known as the Red Crystal, was adopted in 2005 to provide a neutral alternative to the cross and crescent symbols (The emblems of the International Red Cross and Red Crescent Movement, 2010). Currently, the Red Crystal symbol is predominantly utilized in the Israel/Palestine region. This not only speaks to the importance of identifying any pertinent special demographics that the trademark must serve, but also the ease that symbology can be misinterpreted, even when the goal of the symbology is to be the “visible signs of the strict neutrality of humanitarian work”, as is the stated goal of the International Red Cross (The emblems of the International Red Cross and Red Crescent Movement, 2010).

What purpose does the imagery serve?

Metaphors, whether verbal or visual, use one object to represent another object, thereby drawing a comparison. Trademarks that employ visual metaphor are designed to relate an image to the company’s name, product, or values. Well-designed graphics often incorporate multiple metaphors. For example, the trademark for Avery shows three paperclips. The paperclips can be interpreted as metaphorical representation of the company’s large array office supplies. The triangular shape of the three paperclips can also be read as the first letter of the company’s name, Avery. The trademark is a strong red color, which is often associated with danger and resembles the symbol for emergency

lights on a car dashboard — a red triangle. It is impossible to say if any users have ever associated Avery office supplies with emergency flasher lights, but it does illustrate the difficulty in creating a unique trademark that is free from unintended associations.

Figure 3. Avery logo (A) next to symbol for automobile emergency flashers (B). A trademark that is either completely unique or free from misinterpretation is a difficult goal.

What purpose does this study serve?

“Consumer loyalty, perceived quality, positioning, emotional ties, and the many other associations that accompany a brand are priceless assets to the marketability and identity of a product” (Ryan & Conover, 2004, p. 393). Trademarks are “the equivalent of corporate flashcards. They are, in fact, a graphic representation of a company’s product or service” (Ryan & Conover, 2004, p. 393). Research indicates that decision-making is highly influenced by emotion, including decision-making involving purchases (Bradford, 2009). The quote from Ryan and Conover’s work indicates that the user may have an emotional response to a trademark, and that emotional response could influence decision-making involving purchases.

A great deal of research within the domain of human factors has investigated what makes good design, but these studies often focus on relatively simple graphic representations, such as signs and icons. Using the trademark matrix previously mentioned (Figure 1), we can classify trademarks by type (as typographic or graphic) and

then investigate if there is a difference between trademark type on comprehension, emotional impact, and recall.

Hypotheses

Subject-Content Comprehension. The comprehension of trademark (defined as the user's ability to identify what the company does) will be higher for trademarks that employ graphics over those that employ typography. Among the trademarks that employ graphics, trademarks with high subject-content compatibility will have greater comprehension than those with low subject-content compatibility. The review of literature supports that sign, symbols, and icons will increase their comprehension as they increase their subject-content compatibility (McDougall, Bruijn, & Curry, 2000). This indicates that the same should be true for trademarks, and this experiment seeks to verify that assumption.

Visual Metaphor. The comprehension of trademark design will be higher for trademarks that employ visual metaphor. The review of literature suggests that complex use of metaphor in advertisements increases the effectiveness of the advertisement message (Jeong, 2008). This experiment will establish if the same is true for trademarks.

Graphic vs. Typographic Trademark Design. The emotional effect of trademark design may be different for trademarks that employ graphics over those that employ typography. Although trademarks can invoke emotion in the user, it is not known if there will be a difference in emotional effect between trademark types.

Limitations and potential confounds of this study

Some company trademarks, due to their familiarity, would heavily influence the user's comprehension of the trademark, so many trademarks were not useful in this study. The elimination of some trademarks may be considered a limitation. Examples of

trademarks with high familiarity that were not used are McDonald's, Shell, IBM, or USA Networks (see Figure 4 for examples). Trademarks were pre-tested and those that were recognized by the pre-test group were removed from the experiment. More information on these pre-testing procedures can be found in the Materials and Methods section.

Figure 4. Trademarks mentioned in the limitations section.

Additionally, trademarks are usually seen in context, and the meaning of the image can be more difficult to discern if that context is removed. For example, a graphic of a mountain that is embroidered on a jacket invokes images of an outdoor, healthy lifestyle. Another graphic of a mountain on a financial statement invokes the ideas of stability and trust. Yet another graphic of a mountain on a package of chocolate invokes the tradition of quality Swiss chocolate making (see Figure 5 for examples). The examples shown in Figure 5 are for LA Sportiva (mountain sports gear company), Prudential (financial services company), and Toblerone (Swiss chocolate maker acquired by Kraft foods in 1990). Despite the fact that these three trademarks use the related graphic imagery of a mountain, their context helps define their meaning to the user. The removal of context from the trademarks used in this study may be considered a confound.

Lastly, all trademarks used in this study were presented in black and white. As color is known to influence emotion (Moller, Elliot, & Maier, 2009; S. E. Palmer & Schloss, 2010), it was hoped that the removal of color would allow for a more accurate

measure of the emotional effect of trademark type. This removal of color may be considered a confound.

Figure 5. Trademarks involving similar imagery can evoke very different associations, depending on context.

Review of previous literature

What human factors principles apply to trademarks?

Simplicity and uniqueness. The majority of existing research in the area of human factors of graphic design relates to sign and icon design. Although the graphics tend to be simpler in these applications, there are several important design elements that are relevant to trademark design.

Research on icon and sign design indicates that the symbology should be simple and unique (Cowgil & Bolek, 2003). In studying symbol design, Cowgil and Bolek state,

“Anybody should be able to read symbols because the symbols are expected to be read by anyone. The more concrete a message is, and the more the graphic relates to its intended message, the more intuitively that message will be understood. If the message is more conceptual, then the more arbitrary or abstract the image will be, causing a greater need that the relationship between the two be taught to the viewer.” (Cowgil & Bolek, 2003, p. 1.6)

Trademark design, like symbol design, should also strive be simple and unique (Mollerup, 2007). This is not easily accomplished, however, as the desire for both simple and unique imagery may work at cross-purposes. Even with conscientious designers, it is possible to inadvertently mimic an existing trademark. Consider the case study of the 2005 redesign of the Quark trademark (Vit, 2005).

Almost immediately after the release of the updated trademark in 2005, it was noted, quite vocally, that the trademark was remarkably similar to a few other trademarks (Vit, 2005, Figure 7). Previous versions of the Quark trademark, and the 2005 redesign, are shown in Figure 6. Quark makes professional publishing software and most graphic designers have used Quark software at some point in their careers. Perhaps the response to the trademark re-design was so strong because the target audience (graphic designers)

Figure 6. Three versions of the Quark trademark from the 1990's, and the 2005 redesign (on right).

is aware of and educated on the use of trademarks. Quark rebranded their trademark in 2006 (Figure 8) after only one year.

The example of the Quark trademark hints at the complexity of the issue. Although simplicity and uniqueness are both important goals of trademark design, the graphic designer may end up attempting to fulfill both while not sacrificing one for the other. Additionally criticism of 2005 Quark trademark came in the form of the accusation that the stylized letter **Q** was easily mistaken for the letter **a** (Vit, 2005). This brings up the issue of subject-content compatibility.

Subject-content compatibility. Subject-content compatibility refers to the concreteness of the symbology used. When imagery is used, the meaning (the subject) and the image (the content) should work together to aid understanding. Arbitrary associations that must be learned should be avoided.

Comprehension of highway signs hinges on compatibility between content and meaning, standardization, and familiarity (Ben-Bassat & Shinar, 2006). Ben-Bassat and Shinar examined the levels of comprehension of traffic signs from four separate countries. As signs should be understandable by both locals and tourists, the experiment compared level of comprehension for signs from the participant's home country and for signs from

Figure 7. Various logos that have been compared to the 2005 Quark trademark (Vit, 2005).

Figure 8. 2006 rebranding of the Quark trademark.

three foreign countries. They found that compatibility between content and meaning, standardization, and familiarity increased comprehension of sign meaning. Increase in comprehension due to compatibility between content and meaning is not only applicable to signs, however. Understanding of visual information is improved when subject and meaning agree (Ziemkiewicz & Kosara, 2008, 2009). Ziemkiewicz and Kosara found that the comprehension of information was improved when the visual metaphor used to present information agreed with the method used to visualize the data.

Research in the field of icon design also supports that conspicuity and subject-content compatibility increase icon effectiveness (Ng & Chan, 1989). Icon effectiveness is the speed and accuracy with which an icon can be identified. The findings of Ng and Chan (that icon effectiveness increases with subject-content compatibility) is supported by other researchers who have stressed that the reduction of semantic distance between the subject and the meaning (McDougall et al., 2000). McDougall et al. found that identification of icon meaning was significantly more accurate when there was “concreteness” (an agreement or lack of ambiguity between the icon representation and the icon meaning). The 2006 redesign of the Quark trademark is much less simple than its predecessor, but it is more unique and has greater subject-content compatibility. Also, it has not drawn the criticism from the graphic design community that the previous design suffered.

What graphic design principles apply to trademarks?

Simplicity and uniqueness, revisited. Research on aesthetics indicates that there is a popular perception that simplicity and trust are linked for the user (Karvonen, 2000). Nielsen argued that beauty often inhibits good usability, and simplicity invokes confidence (Nielsen, 2000). Similarly, Norman suggests ugly, utilitarian design may suggest dependable, effective, functionality to the user (Norman, 1998). As mentioned in

the previous section, simplicity and uniqueness are both crucial to design success, but may be diametrically opposed.

Balance, contrast, and negative space. Although quantitative analysis of graphic design principles is difficult, research has attempted to statistically evaluate trademarks using graphic design principles including repetition, balance, harmony, contrast, proportion, rhythm, simplicity, and unity (Chen, Cai, Huang, & Kuo, 2004). In the study by Chen et al. statistical analysis determined that balance and contrast were the most crucial for well designed trademarks, and suggested designing trademarks that focus on the company (or product), are unique, avoid meaningless symbology, and graphically employ good use of negative space, balance, and contrast. Chen et al.'s research agrees with previous human factors and aesthetics research, in that it singles out subject-content compatibility and uniqueness as key factors for good trademark design. Simplicity, although highly valued in the field of human factors design, is often eschewed by graphic designers in favor of clever use of perceptual principles like figure-ground reversal.

Figure-ground reversal. The principle of figure-ground perception has long been exploited in graphic design. When the user visually perceives objects, the user divides the visual field in to foreground and background object. An object that occludes another object is perceived to be in front (S. Palmer, 1999). If an image of an object appears in the outline of the foreground object, it may not be noticed by the user. To notice, the user must attend to the background. A figure-ground reversal is a graphic that employs this concept, such as the FedEx trademark (Figure 9). Once the perception of figure and ground is reversed, it may be difficult for the user to ignore the background.

The use of figure-ground reversal can be intentional or unintentional, subtle or bold. The arrow which is created by the negative space between the letters **Ex** in the FedEx trademark is quite subtle, but the animal faces in the tree of the trademark for the

Pittsburgh Zoo are bold, and therefore, much harder to miss than the FedEx arrow. The gorilla and the lion facing off in the trademark creates a sense of tension and excitement that is beautifully contrasted by the tree at the center of the trademark.

Figure 9. Examples of use of figure-ground reversal in the trademark of FedEx and the Pittsburgh Zoo.

Visual metaphor and complexity. Some symbology is used so frequently that its meaning becomes widely accepted, like an arrow to represent movement or directionality; a globe to represent a worldwide presence; or a swoosh to represent speed. These all are examples of visual metaphor (see Figure 10 and Table 1 for examples). A visual metaphor occurs when a word or graphic “that ordinarily designates one thing is used to designate another, thus making an implicit comparison. One thing conceived as representing another; a symbol” (Lexicon of Art and Design Terms, 2010).

Brand trademarks go far beyond the simple symbology of icons and signs in their use of visual metaphor. Although not all trademarks employ visual metaphor, the trademarks that do utilize visual metaphors vary widely in the complexity of use. Some experts suggest that the importance of visual metaphors relates to an ancestral importance and reliance on the visual system (Gallup & Cameron, 1992). Research on visual metaphor in advertisement indicates that complex use of metaphor was more effective than simple use of metaphor (Jeong, 2008). In this study, Jeong found that participants that understood the complex metaphors self-rated their satisfaction higher

Figure 10. Examples of trademarks utilizing metaphors with commonly accepted meaning discussed in the visual metaphor section.

Table 1

Descriptions of trademarks using metaphors with commonly accepted meaning discussed in the visual metaphor section (Figure 10).

Visual Metaphor	Company	Product
Arrow	FedEx	Shipping
	The Green Dot	Recycling
	IntoMart	Polling, Interview, and Research
	Amazon.com	Online Shopping
Globe	The Green Dot	Recycling
	Continental Airlines	Air travel
	AT&T	Telecommunications
	Cable & Wireless	Telecommunications
	Boeing	Aerospace & Defense
Swoosh	Amazon.com	Online Shopping
	Nike	Sports clothing and equipment
	Boeing	Aerospace & Defense

with the advertisements that utilized more complex metaphors. This was attributed to a sense of satisfaction that came from successfully deciphering the puzzle of the metaphor.

The original Apple Computer trademark shows Sir Isaac Newton sitting under an apple tree (Figure 11). Presumably, the apple is about to fall and hit Newton on the head, spurring his thoughts on gravity. The original trademark features a line from a Wordsworth poem, “Newton...A mind forever voyaging through strange seas of thought...alone.” The original Apple Computer trademark could not be considered simple, and would have been very difficult to print legibly at small sizes. It was redesigned before the company was widely known. When considering the 1977 redesign, one must remember that, despite its relative simplicity, in 1977, multiple color printing was significantly more complex and expensive than it is today, so there was a measure of opulence in the 1977 multi-colored trademark.

Figure 11. Original 1976 Apple Computer trademark (left), 1977 redesign (center), and 1999 redesign (right).

According to the designer, the 1977 trademark incorporated metaphor — the colors of the trademark are a metaphorical reference to the computer being marketed as the first home machine that could show color images (Interview with Rob Janoff, designer of the Apple logo, 2009). Obviously, the name of the company is represented by the shape of an

apple, but this is not strictly a metaphor, but a straight-forward representation.

After its release however, the trademark was credited with metaphorical references to the biblical story of Adam and Eve, Newton's experiments on the separation of colors using a prism, and gay pride. The most widely believed falsehood about the trademark is that the bite in the apple is a metaphor for a computer byte. Unfortunately, this great use of metaphor was accidental, the designer claims that he did not know of the potential connection between "bite" and "byte" until after the trademark was complete.

Metaphors in trademarks serve to communicate, in a purely visual form, information instantaneously. The imagery often represents the company's name, the company's product, or the company's values. BP, an energy company formerly known as British Petroleum, uses a green and yellow flower pattern to encourage the user to think of the company's values, which now focus on renewable energy. Demon Internet uses an image of devil horns imbedded in an image of a halo to playfully represent their company's name. The Detroit Red Wings use the metaphor of the wheel as an exemplar to represent Detroit as "The Motor City", and the image of wings to represent their speed and superiority. Fehr & Peers uses the initials of the company's founders to abstractly represent the transportation industry, as the typography's layout resembles a highway interchange. The metaphor may be more obvious in some trademarks than others, and the level of metaphor understanding will also vary. Fans of the Red Wings will probably recognize the metaphor within their trademark more so than do fans of other hockey teams, who will in turn, probably recognize the metaphor more than those who do not follow hockey.

Emotional response to graphic imagery

As mentioned before, research indicates that decision-making is highly influenced by emotion, including decision-making involving purchases (Bradford, 2009). The research of both Ekman and Frijda give a good understanding of the basic human emotions (Ekman,

Figure 12. Trademarks for BP, Demon Internet, Detroit Red Wings, and Fehr & Peers.

1999; Frijda, 1986). Ekman describes fifteen emotions that all humans share, regardless of cultural background (Ekman, 1999, Table 2). How human's respond emotionally to stimuli is complicated. The emotional response to music, art, and literature is complex and not universally predictable (Hjort & Laver, 1997). Emotional response to visual stimuli is instantaneous if the visual stimuli elicits an emotion from the user (Ramachandran & Hirstein, 2000). So how then to quantify the emotional response to a trademark? The *Self-Assessment Manikin* (SAM; Lang, 1980) has been used for over thirty years to measure a participants emotional reaction to an image. The SAM was developed from the *Semantic Difference Scale* (SDS; Mehrabian & Russell, 1974). With the SDS, eighteen pairs of adjectives (Table 3) are rated along a scale. Because the adjective pairs oppose one another in emotional meaning, the results can be evaluated to determine the emotional reaction to the imagery (Bradley & Peter, 1994).

The SAM simplified testing for emotional response by presenting the participants with a visual representation of the three emotional categories from the *SAM* — pleasure, arousal, and dominance (Figure 13). The user was asked to record their emotional response to each trademark presented using the *SAM* (Lang, 1980). The advantage of the SAM over the SDS was that its visual stimulus can be effectively used regardless of age and literacy, and it is much faster to administer, reducing participant fatigue.

Table 2

Ekman's list of basic emotions (Ekman, 1999)

Amusement	Anger	Contempt
Contentment	Disgust	Embarrassment
Excitement	Fear	Guilt
Pride in achievement	Relief	Sadness/Distress
Satisfaction	Sensory pleasure	Shame

Table 3

Semantic difference scale (Mehrabian & Russel, 1974)

Pleasure	Arousal	Dominance
Unhappy to Happy	Relaxed to Stimulated	Controlled to Controlling
Annoyed to Pleased	Calm to Excited	Influenced to Influential
Unsatisfied to Satisfied	Sluggish to Frenzied	Cared for to In control
Melancholic to Contented	Dull to Jittery	Awed to Important
Despairing to Hopeful	Sleepy to Wideawake	Submissive to Dominant
Bored to Relaxed	Unaroused to Aroused	Guided to Autonomous

Trademarks may seek to express company values. Company values, often described in a company's mission or core values statement, range from the obvious to the absurd. Enron touted the values of *communication*, *respect*, *integrity*, and *excellence* before the company's leaders were indicted (Wenning & Fulton, 2007). By examining the common goals and focus of a number of companies, a list of company values was compiled (Table 4). It was hoped that by evaluating trademarks against both the *SAM* and the corporate

Figure 13. Self-assessment manikin (SAM). Visual scale for pleasure (top), arousal (middle), and dominance (bottom).

Table 4

Corporate values

Corporate Values	Aggressive to Conservative
	Dependable to Visionary
	Cautious to Effective
	Old-Fashioned to Progressive

values adjectives a trend in emotional response would be observable.

In summary. After reviewing the literature, the body of knowledge regarding trademarks may be improved by an experiment that would establish the effect of application of human factors principles and graphic design principles to trademark design. Better application of human factors principles and graphic design principles to trademark design may improve the comprehension and recall of the purpose of the trademarks,

regardless of whether the trademark's purpose is to embody the company's name, product, or values.

Specifically, it was hypothesized that the emotional effect of trademark design would be greater for trademarks that employ graphics over those that employ typography. Furthermore, the comprehension of trademark design would be higher for trademarks that employ typography over those that employ graphics. Within the trademarks that employ graphics, trademarks with high subject-content compatibility would have greater comprehension than those with low subject-content compatibility.

Materials and methods

A survey was administered to participants to determine the comprehension, emotional response, and recall of trademarks. In order to locate 60 trademarks with the lowest chance of recognition for use in the experiment, and to effectively divide the trademarks into groups, two pre-tests were created.

To establish a pool of trademarks with a low chance of recognition from the participants, the trademarks were pre-tested with a group of 20 participants to gauge the level of recognition. The 20 pre-test participants were volunteers in the 18 - 25 year old range. Volunteers were recruited from university and work acquaintances to mimic the naive users in the undergraduate psychology participant pool. None of these 20 pre-test participants were part of the main experiment.

Trademarks that were correctly identified by the participants were removed from the selection set. By doing this it was hoped that the potential confound of the experiment participants knowing the companies represented by the trademarks would be reduced. Additionally, trademarks were presented on their own, removed from all contextual cues and color. As color can influence emotions (Moller, Elliot, & Maier, 2009; S. E. Palmer & Schloss, 2010), all of the trademarks were presented in black and white. Color, context, and previous exposure are all key things that a graphic designer must consider when designing a trademark, so the removal of all three from the experiment would remove potential confounds, but it also vastly simplifies the issues involved in trademark design. Trademarks were divided in to four categories:

1. Typographic trademarks
2. Trademarks with both typographic and graphic elements
3. Graphic trademarks with high subject-content compatibility
4. Graphic trademarks with low subject-content compatibility

In order to effectively divide the graphic trademarks between the third and fourth

categories, a panel of ten graphic design professionals was asked to evaluate the level of subject-content compatibility of the trademarks. A visual analogue scale was utilized — this consisted of a 100 millimeter horizontal line, with a value of “Low subject-content compatibility” at one end of the line, and “High subject-content compatibility” at the other end of the scale (Crichton, 2001).

Ten professional designers, including college teachers, graphic designers, and visual communication specialists submitted responses to the visual analogue scale. See Appendix C for trademarks used. None of these 10 panelists were part of the main experiment. The results of the visual analogue scale determined the placement of the graphic trademarks into group 3 (Figure 16) and group 4 (Figure 17) of the study stimulus.

Design of survey

Recognition task. The survey presented the participants with one trademark at a time. The participants were asked if they recognized the trademark. If the participants indicated that they did recognize the trademark, the participants were asked to describe the company. The participants were judged to have recognized the trademark if they could accurately describe the company. The order of presentation of trademarks did not vary between participants.

Emotional impact task. The survey presented the participants with one trademark at a time. The participants were asked to record their emotional response to each trademark presented using the SAM (Lang, 1980). The SAM was developed from the SDS (Mehrabian & Russell, 1974). The order of presentation of trademarks did not vary between participants.

Comprehension task. The survey presented the participants with fifteen trademarks and fifteen business sectors. The trademarks and business sector descriptors were presented simultaneously. The survey was designed so that only one trademark could

be selected for one business sector. For the trademark presented, participants were asked to match the trademark with the business sector of the company. This task varied across the experimental groups, but the order of presentation of trademarks did not vary between participants within groups. Business sectors used for group 1, 2, 3, and 4 are shown in Tables 5, 6, 7, and 9.

Participants in groups 3 and 4 were asked complete a second matching task to match the trademark with the company name. Company names used for group 3 are shown in Table 7 and company names used for group 4 are shown in Table 9.

Figure 14. Trademarks used as stimuli for group 1 - typographic trademarks.

Table 5

Group 1 - multiple choice task - select one industry to which the trademark belongs.

Art Supplies	Automobile (Asian)	Automobile (European)
Baby Bottles	Clothing Line	Drum equipment
Department Store	Electronic Equipment	Frozen Foods
Hockey Equipment	Indian Restaurant	Jewelry
Welding Equipment	Window Blinds	Women's Purses

Figure 15. Trademarks used as stimuli for group 2 - trademarks with both typographic and graphic elements.

Table 6

Group 2 - multiple choice task - select one industry to which the trademark belongs.

Aerospace	Audio/Visual Editing	Children's Toys
Drum Equipment	Educational Software	Flash Memory Drives
Frozen Food	Hairdresser	Interactive Displays
Internet Service Provider	Lifeguard Equipment	Music Festival
Online Wine Shop	Rail Freight	Technology Blog

Figure 16. Trademarks used as stimuli for group 3 - graphic trademarks with high subject-content compatibility.

Table 7

Group 3 - multiple choice task - select one industry to which the trademark belongs.

Documentary Films	Billiards (Pool)	Consumer Protection
Engraving	Free Email Service	Home Electrical Wiring
Library	Office Supplies	Online Wine Shop
Private Military	Rehabilitation & Physical Therapy	Restaurant
Shirt Maker	Worker's Safety	Zoo

Table 8

Group 3 - multiple choice task - select one company name to which the trademark belongs.

Anchor Engraving	Blackhawk Logistics	BNB Office Supplies
Consumer Protection Agency	Duck Shot Restaurant	Electro Domestici
Library of Congress	Open Mail	Pittsburgh Zoo
Rehabilitation Hospital of America	Safeguard	Snooker
Tulip Films	Wine Searcher	Yonca Moda Shirts

Figure 17. Trademarks used as stimuli for group 4 - graphic trademarks with low subject-content compatibility.

Table 9

Group 4 - multiple choice task - select one industry to which the trademark belongs.

Aquarium	Cable and Wireless	Cultural Festival
Doctor (Stomach and Intestines)	Electrical Supplies	Fire Protection
Flower Info Center	Food Critics Guild	Greenhouse Manufacturing
Paper Products	Shoe Maker	Survey and Research Company
Travel Insurance	Watchmaker	Women's Purses

Table 10

Group 4 - multiple choice task - select one company name to which the trademark belongs.

Cable and Wireless	Crane Paper	Dr. Michael Bach
Edox	Elvia	Fire Protection Services
Food Critics Guild	Hoogendoorn	International Flowerbulb Center
IntoMart	Knapp Shoes	Mandarina Duck
Rexel	Ring of Fire	Zaragoza 2016

Demographics Task. The survey presented the participants with a series of demographics questions. The purpose of this section was to gather the participant's demographic information and to act as a distracter task before the final section of the survey, which was a recall task. The demographics task took approximately five minutes to complete.

Recall task. The survey presented the participants with thirty trademarks, one trademark at a time. Fifteen trademarks were novel to the participants and fifteen trademarks were identical to the trademarks from earlier in the survey. The user was asked to record if they recognized the trademark from earlier in the survey. This information was entered using a nine-point Likert scale, where the scale values ranged from “definitely not on today’s test” to “definitely on today’s test.”

Equipment

Four surveys were created using Survey Monkey. Participants took the survey in a computer lab on the campus of San José State University. The survey was self paced and was completed by all participants in under one hour. A participant consent letter was included in the survey and was acknowledged and electronically signed by all participants (Appendix D). A paper copy of the survey created for group 3 is included as a representative sample of the surveys created for this experiment (Appendix F).

Results

Statistical analysis was done to compare the results of the four groups. Specifically, the comprehension, emotional response, and recall of typographic trademarks were compared to graphic trademarks. Additionally, trademarks were compared on comprehension after being grouped by their use of metaphor and use of figure-ground reversal.

Participants

Participants ($n = 218$) were drawn from the undergraduate psychology participant pool. A power analysis (power = .80, alpha = .05, and a medium effect size) determined a total sample size of 200 (50 participants per group). Demographic data were collected for all participants, including, but not limited to: age, gender, educational experience, college major, handedness, and experience with visual design. There were 55 participants per group in group 1 and 2, and 54 participants per group in group 3 and 4. Approval for the study was granted by the SJSU Human Subjects Institutional Review Board and participants provided their informed consent.

Removal of participants. Initially, 221 participants took the survey, but three participants were removed from the final data set because those participants did not provided valid answers in the comprehension task of the experiment. In the comprehension task of the survey, participants were asked to match fifteen trademarks to fifteen company descriptions. The three participants that were removed from the sample set entered the matching values as fifteen consecutive numbers, so this carelessly entered data were removed from the set.

Comprehension task

One of the initial hypotheses of this study was that comprehension of trademark design would be higher for trademarks that employ graphics (group 3 and 4) over those that employ typography (group 1 and 2). Within the trademarks that employ graphics, trademarks with high subject-content compatibility (group 3) will have greater comprehension than those with low subject-content compatibility (group 4). This hypothesis was upheld through the statistical analysis.

Figure 18. Percent correctly matched in comprehension task with standard deviations.

A single-factor, between-subjects ANOVA was conducted using the participant's group as the independent variable and the participant's percentage of trademarks correctly matched as the dependent variable. The analysis showed a significant difference

Figure 19. Matching (trademark to company description) percent correct (groups 1 and 2).

Figure 20. Matching (trademark to company description) percent correct (groups 3 and 4).

between groups on the percentage of trademarks correctly matched,

$$F(3, 214) = 122.35, p < .001, \eta^2 = .632, MS_{\text{error}} = .020.$$

In comparing the individual groups using a Sidak multiple comparison planned test, group 3 performed significantly better than all other groups. Group 2 performed significantly better than group 1 (Table 11 for the results of the Sidak planned comparison test). This indicates that, in the absence of contextual information, graphic trademarks with high subject-content compatibility have higher comprehension than do typographic trademarks. This also indicates that comprehension is increased as subject-content compatibility increases.

Table 11

Comprehension - comparisons of group mean differences using Sidak planned comparison test on percent correct in matching task.

Group (A)	Group (B)	Mean Difference (A-B)	Standard Error	Significance	Cohen's d
1	2	-0.12 *	.027	P < .001	-0.86
	3	-0.47 *	.027	P < .001	-3.48
	4	-0.05	.027	P = .268	-0.46
2	3	-0.35 *	.027	P < .001	-2.14
	4	-0.07	.027	P = .082	0.47
3	4	0.42 *	.027	P < .001	3.03

* Mean difference is significant at the 0.05 level

Groups 3 and 4 were given an additional comprehension task of matching company name to trademark. As trademarks for groups 1 and 2 included the text of the company name, they were not included in this analysis.

A single-factor, between-subjects ANOVA was conducted using the participant's

group as the independent variable and the participant's percentage of trademarks correctly matched by company name as the dependent variable. The analysis showed a significant difference between groups on the percentage of trademarks correctly matched, $F(1, 106) = 116.08, p < .001, \eta^2 = .523, MS_{\text{error}} = .028$. Trademarks with high subject-content compatibility significantly increased the participant's ability to correctly match trademark to company name.

Recognition task

The participants were asked if they recognized the trademarks, and if so, to identify the industry that the company represented. Fifteen trademarks were presented to each participant. With 218 participants, trademarks were correctly identified 8 times out of a total of 3270 presentations, giving an overall recognition of trademarks less than 0.25% of the time. Recognition by group is shown in Table 12.

Table 12

Recognition - how many participants believed they recognized the trademarks presented and how many were correct in their identification.

Recognition	% Recognition	% Correct Identification
Group 1	5.45%	0.61%
Group 2	2.91%	0.36%
Group 3	9.63%	0.00%
Group 4	8.40%	0.00%
Total	6.60%	0.24%

Because the trademarks had been pre-tested to avoid usage of trademarks that were recognizable, and the overall recognition level of the trademarks was less than 0.25%, it is

believed that recognition of the trademarks is not a confound in this experiment. To test this, a single-factor, between-subjects analysis of variance (one-factor ANOVA) was conducted using the participant's group as the independent variable and the participant's percentage of trademarks recognized and percentage of trademarks correctly identified as the dependent variables. The analysis showed a significant difference between groups on the percentage of trademarks recognized,

$F(3, 214) = 4.45, p = .005, \eta^2 = .059, MS_{\text{error}} = 113.55$. but no significant difference between groups on the percentage of trademarks recognized correctly. This would indicate that, although participants may have believed that they recognized the trademarks, especially for the graphic trademarks in groups 3 and 4, they were responding to the visual stimuli and not actual recognition of the trademarks.

Emotional effect task

An initial hypothesis of this study was that the emotional effect of trademark design would be greater for trademarks that employ graphics over those that employ typography. To test this, a single-factor, between-subjects ANOVA was conducted using the participant's group as the independent variable and the participant's average emotional response across the fifteen presented trademarks in the three categories of the *SAM* (Lang, 1980) as the dependent variables. These three categories are pleasure, arousal, and dominance. The analysis showed no significant difference between groups. Results of the ANOVAs for the emotional effect task were:

- Pleasure: $F(3, 214) = 0.26, p = .86, \eta^2 = .006, MS_{\text{error}} = .155$
- Arousal: $F(3, 214) = 0.63, p = .60, \eta^2 = .009, MS_{\text{error}} = .283$
- Dominance: $F(3, 214) = 0.17, p = .92, \eta^2 = .002, MS_{\text{error}} = .169$

Additionally, the participants had rated the trademarks on four sets of corporate values (aggressive to conservative, dependable to visionary, cautious to effective, and

old-fashioned to progressive). The ANOVA analysis showed no significant difference between groups on the four sets of corporate values.

- Aggressive to Conservative: $F(3, 214) = 3.59, p = .015, \eta^2 = .048, MS_{\text{error}} = .897$
- Dependable to Visionary: $F(3, 214) = 0.49, p = .69, \eta^2 = .007, MS_{\text{error}} = .903$
- Cautious to Effective: $F(3, 214) = 1.89, p = .13, \eta^2 = .026, MS_{\text{error}} = .975$
- Old-Fashioned to Progressive: $F(3, 214) = 2.04, p = .11, \eta^2 = .028, MS_{\text{error}} = .677$

This indicates that, despite the effect that emotion may have on the user, there is no evidence of a difference in emotional effect between trademarks employ graphics over those that employ typography. This result could potentially have been confounded by the specific trademarks used, or by the lack of color in the presentation of the trademarks, but that cannot be determined at this time.

Recall task

A single-factor, between-subjects ANOVA was conducted using the participant's group as the independent variable and the participant's percentage of trademarks correctly identified as being part of the survey as the dependant variable. Experimental data were collected in the survey on a scale of 1 to 9. Surprisingly, 99.4% of the participant's answers were either 1 or 9, showing a remarkable level of confidence in the recall task. To conduct the ANOVA, answers of 1, 2, and 3 were converted to negative responses and answers of 7, 8, and 9 were converted to positive responses. Answers of 4, 5, and 6 (less than 0.08% of the total responses) were eliminated from the analysis. The percentage of correct recall responses for the four groups was:

- Group 1: 99.82%
- Group 2: 99.45%
- Group 3: 99.44%
- Group 4: 99.81%

The analysis showed no significant difference between groups on ability to recall.

$F(3, 214) = 0.667, p = .57, \eta^2 = .013, MS_{\text{error}} < .001$. This could be because there is truly no difference in the emotional impact and ability to recall, or it could be confounded by the specific trademarks used. Additionally, the ability to recall could be confounded due to the high exposure rate during the survey. Participants saw the trademarks during the recognition task, the emotional response task, and the comprehension task. The demographic data task was inserted into the survey after these three tasks but before the recall task to act as a distracter, but the multiple exposures to the stimuli could have acted as a confound to the recall task resulting in the high percentage of correct recall responses.

Additional analysis of data

As the results of the ANOVA for the comprehension task were found to be significant, additional testing was done to examine the differences between groups of trademarks based on their use of metaphor and use of figure-ground reversal. Trademarks were categorized as utilizing or not utilizing visual metaphor and figure-ground reversal. Of the 60 trademarks used across the four groups, 18 did not employ visual metaphor and 42 did employ visual metaphor (see Figure 21). 47 trademarks did not contain figure-ground reversal and 13 trademarks did contain figure-ground reversal (Figure 22).

Metaphor

A single-factor, between-subjects ANOVA was conducted using the presence or absence of visual metaphor as the independent variable and the participant's percentage of correct matching in the comprehension task as the dependant variable. In order to do this the trademarks were divided into two groups: those that use and those that do not use visual metaphor. As visual metaphor is defined as a visual design "that ordinarily designates one thing is used to designate another, thus making an implicit comparison. One thing conceived as representing another; a symbol." (Lexicon of Art and Design

Terms, 2010) All graphic trademarks are not, therefore, visual metaphors, as not all of the graphic trademarks create an implicit comparison. Figure 21 shows the trademarks used in this experiment divided by use of visual metaphor.

The analysis showed a significant difference between trademarks with and without visual metaphor on the percentage of trademarks correctly matched, $F(1, 58) = 14.92, p < .001, \eta^2 = .63, MS_{\text{error}} = .083$. This indicates that trademarks using visual metaphor have a much higher rate of comprehension. It is possible, however, that the trademarks used in this study may have employed particularly effective visual metaphors, causing the data to potentially be skewed. Additionally, on average, more graphic trademarks use visual metaphor than do typographic trademarks, which may confound the results of this experiment. Additional analysis of the data should be conducted, including a two-way ANOVA comparing the percent correct for trademarks with and without metaphor to further understand the data.

Figure-ground reversal

A single-factor, between-subjects ANOVA was conducted using the presence or absence of figure-ground reversal as the independent variable and the participant's percentage of correct matching of trademark to company description in the comprehension task as the dependant variable. In order to do this the trademarks were divided into two groups: those that use and those that do not use figure-ground reversal. Figure-ground reversal is defined as "the visual unity, yet separability, of a form and its background." (Lexicon of Art and Design Terms, 2010) Figure 22 shows the trademarks used in this experiment divided by use of visual metaphor.

The analysis showed a significant difference between groups on the percentage of trademarks recognized, $F(1, 58) = 4.41, p = .04, \eta^2 = .07, MS_{\text{error}} = .096$. This indicates that trademarks using figure-ground reversal have a higher rate of comprehension. As the

Figure 21. Division of trademarks that use and do not use metaphor.

trademarks using figure-ground reversal are predominantly a subset of the trademarks using metaphor, it does not increase the amount of variability accounted for above that of the ANOVA test for metaphor. Also, as with the test regarding metaphor, these results may be confounded because more graphic trademarks use visual metaphor than do typographic trademarks.

Figure 22. Division of trademarks that use and do not use figure-ground reversal.

Discussion

The goal of a trademark is to visually “identify and distinguish” (United States Code, Title 15, Chapter 22 - Trademarks, 1989). This study has examined some of the potential factors that could influence the public to differentiate companies based on their trademarks, including their typographic and graphic content, use of visual design principles, including visual metaphor and figure-ground reversal. As of 2007, there were more than six million companies with employees and over 21 million companies without employees in the United States (How many small businesses are there, 2011). Roughly 600,000 new companies are created each year, while approximately the same number close (How many small businesses are there, 2011). It is not known how many of these companies have created trademarks or how much effort and forethought was put in creating the trademarks that serve to visually “identify and distinguish” (United States Code, Title 15, Chapter 22 - Trademarks, 1989).

There was a significantly higher comprehension of graphic trademarks with high subject-content compatibility over typographic trademarks. There was also a significantly higher comprehension of trademarks that utilized visual metaphor and figure-ground reversals over trademarks that did not. That no significant difference was found in the recall of trademarks based on type could be due to the testing methodology or the specific trademarks chosen for the experiment. Perhaps a more complex or more time-consuming distracter task between the main section of the experiment and the recall task would have produced different results.

That no significant difference was found in the emotional effect of trademarks based on type could be due to the testing methodology (use of the SAM) or the specific trademarks chosen for the experiment. Another option is that it could be due to the way individuals react emotionally to trademarks. The experiment was arranged assuming that an emotional response would be instantaneous, in the way individuals respond emotionally

to color (S. E. Palmer & Schloss, 2010). However, an individual's response to color, while immediate, is based on preferences and associations developed throughout their lives. Perhaps an individual's emotional response to a trademark is more dependent on knowledge and experience with the brand's products, and therefore is not instantaneous.

Recommendations

In this experiment, the statistical data indicate that, in the absence of contextual information, graphic trademarks with high subject-content compatibility have higher comprehension than do typographic trademarks. When in the early stages of trademark design and branding, it may be worth investigating the context in which the trademark will be presented. Widely known trademarks, like those of Apple or Nike, can be presented on their own, free of other contextual information, and still be widely recognized. This is only true of widely known trademarks, and trademarks become widely known due to the success, longevity, and investment of the company or product, not because of the trademark design itself. Those companies that wish their trademarks to be highly comprehensible regardless of the contextual environment should consider designing their trademarks to employ visual metaphor with a high level of subject-content compatibility.

Before designing a trademark, discussion about the context (how and where the trademark will be seen) as well as the key messages of the trademark is important. As trademarks seek to evoke the company's name, product, or values, it is important to establish from the start of the process where the emphasis should lay. Additionally, although a trademark can and should convey information on the company's brand to the user, the success of the trademark in conveying this information is independent of the success of the company's brand.

Conclusion

The results of this experiment regarding the emotional effect of trademarks may be of interest to those in the graphic design field. Additional testing with a different or larger set of trademarks or a different measure of emotional effect could clarify the issue. As color was removed from all of the trademarks used in this study, further experimentation utilizing color would be helpful. As context was also removed from the trademarks for testing, further experimentation with trademarks presented in their natural environment would be interesting.

Numerous studies discussed in the review of literature indicate that comprehension of signs and symbols is increased as subject-content compatibility is increased (Ben-Bassat & Shinar, 2006; Ziemkiewicz & Kosara, 2008, 2009; Ng & Chan, 1989; McDougall et al., 2000). This experiment agrees with the prior research and expands the prior research to trademark design. As previous research has indicated that effectiveness increases with metaphor complexity in advertisements (Jeong, 2008), it would be interesting to conduct a similar study that looked at the levels of subject-content compatibility or at different levels of complexity in the area of visual metaphor or figure-ground reversal. Also, because the meaning behind the visual metaphor must be understood in order to be effective, it would be interesting to perform a longitudinal study where the meanings behind the visual metaphor could be explained to a group of participants. Then the long-term understanding of the metaphorical meaning could be compared to a control group that did not have the visual metaphor explained to them.

The matrix created by the author (Figure 1 on p. 3) was useful in the classification of trademarks for this initial study, but improvements should be made. The current matrix first divides trademarks into two major groups — typographic (text-based) and graphic (image-based). Typographic trademarks can be further divided into logo-type (where the name of the company is used as the trademark) and abbreviation (where an

abbreviation of the name of the company is used as the trademark). Graphic trademarks can be sub-divided into three categories, based on if the imagery is used to represent the name, product, or values of the company. Due to the influence of subject-content compatibility on the participant's comprehension, one proposed improvement would be to change the first level of classification from two groups (typographic and graphic) to three groups (typographic, graphic-concrete, and graphic-abstract).

“Anyone can design a logo, but not everyone can design the right logo. A successful design may meet the goals set in your design brief, but a truly enviable iconic design will also be simple, relevant, enduring, distinctive, memorable, and adaptable” (Airey, 1992, p.22). With so many existing and new companies needing to visually distinguish themselves and their products from others, it is hoped that this experiment will lead to an increase in discussions regarding the comprehension, recall, and emotional effect of trademarks as well as an increase in discussions regarding the application of higher levels of subject-content compatibility, use of visual metaphor, and use of figure-ground reversal in trademark design.

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Appendix A - Definition of terms

Brand or brand mark - trademark for a specific product or brand of products within a larger company.

Figure-ground - “the visual unity, yet separability, of a form and its background. Certain alternating figures may help to convey the potential confusion resulting from ambiguity in the figure-ground relationship.” (Lexicon of Art and Design Terms, 2010)

Metaphor - A situation in which a word or thing that ordinarily designates one thing is used to designate another, thus making an implicit comparison. One thing conceived as representing another; a symbol.” (Lexicon of Art and Design Terms, 2010)

Trademark - “A company’s identity - name, logo, symbol, design, or other device - used to show that a product or service is made by a particular producer and legally registered so that no other person or firm can use it... The use of a trademark indicates that the maker believes that the quality of the product will enhance his or her standing or goodwill, and a known trademark indicates to a buyer the reputation that is staked on the goods.” (Lexicon of Art and Design Terms, 2010)

Appendix B - Weckerle's original (1968) 9x9 matrix.

Classification of signets by sub-elements	Verbal symbol: logotype	Verbal symbol: abbreviation	Verbal symbol: initial	Icon: product-oriented	Icon: metaphoric	Mark: figurative	Mark: coloured	Emblem: private	Emblem: public
Verbal symbol: logotype	SWISSAIR		ERTLI				SWISSAIR
Verbal symbol: abbreviation		IBM							+GF+
Verbal symbol: initial			OE
Icon: product-oriented
Icon: metaphoric
Mark: figurative
Mark: coloured
Emblem: private
Emblem: public

Figure 23. Weckerle's 9x9 matrix of the taxonomy of product symbology.

Appendix C - Trademarks presented to panel of professionals for ranking

A company trademark can include typographic elements, graphic elements, or a combination of both. Graphics can be used to represent the name, product, or values of the company.

When a graphic is used in sign or icon design, the graphic must visually represent its intended meaning clearly. Subject-content compatibility refers to the concreteness of the symbology used. When graphic imagery is used, the meaning (the subject) and the image (the content) should work together to aid understanding.

There are several studies that test the effect of subject-content compatibility on sign and icon design. For my master's thesis, I am designing an experiment which will examine the effect of subject-content compatibility, as well as the effect of typographic vs graphic design elements, on the comprehension and recall of company trademarks.

In order to test the effect of subject-content compatibility on company trademarks, I must first confirm that I am working with a selection of trademarks that can be classified based on their level of subject-content compatibility. To do this, I have included thirty trademarks along with a visual analog scale for each trademark. Each trademark is for a real company, organization, or event. Please mark on the visual analog scale where you think the trademark falls along a continuum from low subject-content compatibility to high subject-content compatibility.

I am not asking you to judge whether a graphic is good or bad, but the level of subject-content compatibility.

Graphics that have subject-content compatibility are those that concretely represent the name, product, and values of a company. Lower subject-content compatibility trademarks will only concretely represent the name, the product, or the values. The lowest subject-content compatibility trademarks will either not graphically represent the name, the product, or the values, or not represent them concretely. Two examples are shown below:

Thank you very much for helping me out with my master's thesis. If you have any questions regarding this survey, please do not hesitate to contact me.

Katherine Spencer
760.525.0523
katherine@spencer-design-group.com

Figure 24. Trademarks presented to panel of professionals for ranking (page 1 of 7)

<p>Name: Rehabilitation Hospital of America Focus: Rehabilitation and Physical Therapy</p>	<p>Low subject-content compatibility</p>	<p>High subject-content compatibility</p>
<p>Name: Ring of Fire Focus: Aquarium</p>	<p>Low subject-content compatibility</p>	<p>High subject-content compatibility</p>
<p>Name: Tulip Films Focus: Documentary Films</p>	<p>Low subject-content compatibility</p>	<p>High subject-content compatibility</p>
<p>Name: International Flower Bulb Centre Focus: Promotional organization for Dutch flower bulb growers and traders</p>	<p>Low subject-content compatibility</p>	<p>High subject-content compatibility</p>
<p>Name: IntoMart Focus: Polling, Interview, and Research</p>	<p>Low subject-content compatibility</p>	<p>High subject-content compatibility</p>

Figure 25. Trademarks presented to panel of professionals for ranking (page 2 of 7)

<p>Name: Library of Congress Focus: National Library</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-bottom: 1px solid black;"></div> </div> <div style="text-align: center;">High subject-content compatability</div> </div>
<p>Name: Crane Paper Focus: Paper Products</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-bottom: 1px solid black;"></div> </div> <div style="text-align: center;">High subject-content compatability</div> </div>
<p>Name: Electro Domestic Focus: Home Wiring</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-bottom: 1px solid black;"></div> </div> <div style="text-align: center;">High subject-content compatability</div> </div>
<p>Name: Cable and Wireless Focus: Cable and Wireless</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-bottom: 1px solid black;"></div> </div> <div style="text-align: center;">High subject-content compatability</div> </div>
<p>Name: Pittsburgh Zoo Focus: Zoo</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-bottom: 1px solid black;"></div> </div> <div style="text-align: center;">High subject-content compatability</div> </div>

Figure 26. Trademarks presented to panel of professionals for ranking (page 3 of 7)

<p>Name: BNB Office Supplies Focus: Office Supplies</p>	<div> <div>Low subject-content compatability</div> <div>High subject-content compatability</div> </div>
<p>Name: Anchor Engraving Focus: Engraving</p>	<div> <div>Low subject-content compatability</div> <div>High subject-content compatability</div> </div>
<p>Name: Knapp Shoes Focus: Shoe Manufacturing</p>	<div> <div>Low subject-content compatability</div> <div>High subject-content compatability</div> </div>
<p>Name: Yonca Moda Shirts Focus: Shirt Maker</p>	<div> <div>Low subject-content compatability</div> <div>High subject-content compatability</div> </div>
<p>Name: Edox Focus: Watchmaker</p>	<div> <div>Low subject-content compatability</div> <div>High subject-content compatability</div> </div>

Figure 27. Trademarks presented to panel of professionals for ranking (page 4 of 7)

<p>Name: Consumer Protection Agency Focus: Consumer Protection</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-left: 1px solid black; border-right: 1px solid black; height: 10px;"></div> </div> <div style="text-align: center;">High subject-content compatability</div> </div>
<p>Name: Elvia Focus: Travel Insurance</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-left: 1px solid black; border-right: 1px solid black; height: 10px;"></div> </div> <div style="text-align: center;">High subject-content compatability</div> </div>
<p>Name: Snooker Focus: Billiards (Pool)</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-left: 1px solid black; border-right: 1px solid black; height: 10px;"></div> </div> <div style="text-align: center;">High subject-content compatability</div> </div>
<p>Name: Hoogendoorn Focus: Greenhouse Manufacturing</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-left: 1px solid black; border-right: 1px solid black; height: 10px;"></div> </div> <div style="text-align: center;">High subject-content compatability</div> </div>
<p>Name: Blackhawk Logistics Focus: Private Military</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-left: 1px solid black; border-right: 1px solid black; height: 10px;"></div> </div> <div style="text-align: center;">High subject-content compatability</div> </div>

Figure 28. Trademarks presented to panel of professionals for ranking (page 5 of 7)

<p>Name: Duck Shot Restaurant Focus: Restaurant</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div>Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-left: 1px solid black; border-right: 1px solid black; height: 10px;"></div> </div> <div>High subject-content compatability</div> </div>
<p>Name: Zaragoza 2016 Focus: Cultural Festival</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div>Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-left: 1px solid black; border-right: 1px solid black; height: 10px;"></div> </div> <div>High subject-content compatability</div> </div>
<p>Name: Wine Searcher Focus: Online Wine Shop</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div>Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-left: 1px solid black; border-right: 1px solid black; height: 10px;"></div> </div> <div>High subject-content compatability</div> </div>
<p>Name: Dr. Michael Bach Focus: Doctor (Stomach and Intestines)</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div>Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-left: 1px solid black; border-right: 1px solid black; height: 10px;"></div> </div> <div>High subject-content compatability</div> </div>
<p>Name: Fire Protection Services Focus: Fire Protection Services</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div>Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-left: 1px solid black; border-right: 1px solid black; height: 10px;"></div> </div> <div>High subject-content compatability</div> </div>

Figure 29. Trademarks presented to panel of professionals for ranking (page 6 of 7)

<p>Name: Safeguard Focus: Worker's & Workplace Safety</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-bottom: 1px solid black;"></div> </div> <div style="text-align: center;">High subject-content compatability</div> </div>
<p>Name: Mandarina Duck Focus: Women's Purses</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-bottom: 1px solid black;"></div> </div> <div style="text-align: center;">High subject-content compatability</div> </div>
<p>Name: Food Critics Guild Focus: Food Critics Guild</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-bottom: 1px solid black;"></div> </div> <div style="text-align: center;">High subject-content compatability</div> </div>
<p>Name: Rexel Focus: Electrical Supplies</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-bottom: 1px solid black;"></div> </div> <div style="text-align: center;">High subject-content compatability</div> </div>
<p>Name: Open Mail Focus: Free Email Service</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">Low subject-content compatability</div> <div style="flex-grow: 1; border-top: 1px solid black; position: relative;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-bottom: 1px solid black;"></div> </div> <div style="text-align: center;">High subject-content compatability</div> </div>

Figure 30. Trademarks presented to panel of professionals for ranking (page 7 of 7)

Appendix D - Participant consent form

Responsible Investigator:. Katherine Spencer, San José State University
Graduate Student, M.S. Human Factors and Ergonomics Engineering candidate

Title of Protocol:. Evaluating Trademark Design

1. You have been asked to participate in a study investigating the visual impact of trademarks.
2. You will be asked to complete a computer based survey of approximately one hour. Your participation is voluntary and you may withdraw from the study at any time.
3. There is no risks associated with participation.
4. The information you provide could prove beneficial and guide efforts to design future trademarks.
5. All responses and data collected will be kept confidential. Although the results of this study may be published, no information that could identify you will be included. All comments and feedback are entirely confidential.
6. There is no compensation for participation in this study. If you are participatings as part of the undergraduate research pool, you will receive one hour of credit.
7. Questions about this research may be addressed to Katherine Spencer at katherine@spencer-design-group.com. Complaints about the research may be presented to Dr. Louis Freund, Director, Graduate Program in Human Factors and Ergonomics, Department of Industrial and Systems Engineering, San José State University, at (408) 924-3890. Questions about a research subjects' rights, or research-related injury may be presented to Pamela Stacks, Ph.D., Associate Vice President, Graduate Studies and Research, at (408) 924-2480.
8. No service of any kind, to which you are otherwise entitled, will be lost or jeopardized if you choose not to participate in the study.
9. Your consent is being given voluntarily. You may refuse to participate in the entire study or in any part of the study. You have the right to not answer questions you do not wish to answer. If you decide to participate in the study, you are free to withdraw at any time without any negative effect on your relations with San Jose State University.
10. At time that you sign this consent form, you will receive a copy of it for your own records, signed and dated by the investigator. The signature of a subject on this document indicates agreement to participate in the study. The signature of a researcher on this document indicates agreement to include the above named subject in the research and attestation that the subject has been fully informed of his or her rights.

Participant's Signature: _____Date: _____

Investigator's Signature: _____Date: _____

The following page shows the participant consent form as it was presented to the Institutional Review Board.

Appendix D - Participant consent form

Charles W. Davidson
College of Engineering

**Industrial and Systems
Engineering Department**

One Washington Square
San José, California 95192-0085
Voice: 408-924-3301
Fax: 408-924-4040
www.engr.sjsu.edu/ise

Responsible Investigator: Katherine Spencer, San José State University

Graduate Student, M.S. Human Factors and Ergonomics Engineering candidate

Title of Protocol: Evaluating Trademark Design

1. You have been asked to participate in a study investigating the visual impact of trademarks.
2. You will be asked to complete a computer based survey of approximately one hour. Your participation is voluntary and you may withdraw from the study at any time.
3. There is no risks associated with participation.
4. The information you provide could prove beneficial and guide efforts to design future trademarks.
5. All responses and data collected will be kept confidential. Although the results of this study may be published, no information that could identify you will be included. All comments and feedback are entirely confidential.
6. There is no compensation for participation in this study. If you are participating as part of the undergraduate research pool, you will receive one hour of credit.
7. Questions about this research may be addressed to Katherine Spencer at katherine@spencer-design-group.com. Complaints about the research may be presented to Dr. Louis Freund, Director, Graduate Program in Human Factors and Ergonomics, Department of Industrial and Systems Engineering, San Jose State University, at (408) 924-3890. Questions about a research subjects' rights, or research-related injury may be presented to Pamela Stacks, Ph.D., Associate Vice President, Graduate Studies and Research, at (408) 924-2480.
8. No service of any kind, to which you are otherwise entitled, will be lost or jeopardized if you choose not to participate in the study.
9. Your consent is being given voluntarily. You may refuse to participate in the entire study or in any part of the study. You have the right to not answer questions you do not wish to answer. If you decide to participate in the study, you are free to withdraw at any time without any negative effect on your relations with San José State University.
10. At time that you sign this consent form, you will receive a copy of it for your own records, signed and dated by the investigator. The signature of a subject on this document indicates agreement to participate in the study. The signature of a researcher on this document indicates agreement to include the above named subject in the research and attestation that the subject has been fully informed of his or her rights.

Participant's Signature: _____ Date: _____

Investigator's Signature: _____ Date: _____

Appendix E - Source of trademarks for study

Trademarks within this study were sourced from one of the following web sites:

- the company's own web site
- www.goodlogo.com
- www.seeklogo.com
- www.applegazette.com
- www.graphicdesignblog.org
- www.vector.tutsplus.com
- www.neurosoftware.ro
- www.underconsideration.com
- www.logodesignlove.com
- www.vidalegloesener.lu
- www.eulda.com
- www.wolda.org
- the book, Trademarks designed by Chermayeff & Geismar (Chermayeff, Geismar, & Geissbuhler, 2000)

Appendix F - Sample survey

The following is a sample of the survey that was given as part of the main experiment. This is the survey for group 3, the high-subject compatibility group. Because the survey was designed as a computerized survey, some formatting and page break issues that are evident in this sample were not evident in the computerized survey.

1. Participant Consent Form

1. Responsible Investigator: Katherine Spencer, San Jose State University Graduate Student, M.S. Human Factors and Ergonomics Engineering candidate

Title of Protocol: Evaluating Trademark Design

- a. You have been asked to participate in a study investigating the visual impact of trademarks.
- b. You will be asked to complete a computer based survey of approximately one hour. Your participation is voluntary and you may withdraw from the study at any time.
- c. There is no risks associated with participation.
- d. The information you provide could prove beneficial and guide efforts to design future trademarks.
- e. All responses and data collected will be kept confidential. Although the results of this study may be published, no information that could identify you will be included. All comments and feedback are entirely confidential.
- f. There is no compensation for participation in this study. If you are participating as part of the undergraduate research pool, you will receive one hour of credit.
- g. Questions about this research may be addressed to Katherine Spencer at katherine@spencer-design-group.com.

Complaints about the research may be presented to Dr. Louis Freund, Director, Graduate Program in Human Factors and Ergonomics, Department of Industrial and Systems Engineering, San Jose State University, at (408) 924-3890. Questions about a research subjects' rights, or research-related injury may be presented to Pamela Stacks, Ph.D., Associate Vice President, Graduate Studies and Research, at (408) 924-2480.

h. No service of any kind, to which you are otherwise entitled, will be lost or jeopardized if you choose not to participate in the study.

i. Your consent is being given voluntarily. You may refuse to participate in the entire study or in any part of the study. You have the right to not answer

questions you do not wish to answer. If you decide to participate in the study, you are free to withdraw at any time without any negative effect on your relations with San Jose State University.

j. At time that you sign this consent form, if you wish to receive a copy of it for your own records, signed and dated by the investigator, please inform the investigator, and a copy will be provided to you.

Selecting the box below indicates agreement to participate in the study and that the subject has been fully informed of his or her rights.

To agree to participate in this experiment, select the circle below. If you would like to decline to participate, inform the experiment investigator at this time.

If you would like a copy of this agreement, inform the experiment investigator at this time or at the completion of the survey.

☐ I agree to participate in this experiment

2. What is the current date and time?

Date and Time: / / : AM/PM

2. Recognition

Identify trademarks that you are familiar with.

1. Do you recognize the trademark above?

- ☐ No
☐ Yes

If yes, what does this company do?

2. Do you recognize the trademark above?

- ☐ No
☐ Yes

If yes, what does this company do?

3. Do you recognize the trademark above?

- ☐ No
☐ Yes

If yes, what does this company do?

4. Do you recognize the trademark above?

- ☐ No
☐ Yes

If yes, what does this company do?

5. Do you recognize the trademark above?

- ☐ No
☐ Yes

If yes, what does this company do?

6. Do you recognize the trademark above?

- ☐ No
☐ Yes

If yes, what does this company do?

7. Do you recognize the trademark above?

- ☐ No
☐ Yes

If yes, what does this company do?

8. Do you recognize the trademark above?

- ☐ No
☐ Yes

If yes, what does this company do?

9. Do you recognize the trademark above?

- ☐ No
☐ Yes

If yes, what does this company do?

10. Do you recognize the trademark above?

- ☐ No
☐ Yes

If yes, what does this company do?

11. Do you recognize the trademark above?

- ☐ No
☐ Yes

If yes, what does this company do?

12. Do you recognize the trademark above?

- ☐ No
☐ Yes

If yes, what does this company do?

13. Do you recognize the trademark above?

- ☐ No
☐ Yes

If yes, what does this company do?

14. Do you recognize the trademark above?

- ☐ No
☐ Yes

If yes, what does this company do?

15. Do you recognize the trademark above?

- ☐ No
☐ Yes

If yes, what does this company do?

3. Emotional Response

Rate your emotional response to a company's trademark logo. You will be given groups of adjectives that describe opposing emotions. Although some of the questions may seem unusual, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
	☐	☐	☐	☐	☐
Unhappy Annoyed Unsatisfied Melancholic Despairing Bored	1	2	3	4	5 Happy Pleased Satisfied Contented Hopeful Relaxed

2. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
	☐	☐	☐	☐	☐

Relaxed
Calm
Sluggish
Dull
Sleepy
Unaroused

1

2

3

4

5

Stimulated
Excited
Frenzied
Jittery
Wideawake
Aroused

3. How does the trademark above make you feel?

Emotional Response

1 2 3 4 5

Controlled
Influenced
Cared for
Awed
Submissive
Guided

1

2

3

4

5

Controlling
Influential
In control
Important
Dominant
Autonomous

4. Company Values

Rate what you think the company is trying to communicate with their trademark.

You will be given a pair of adjectives that describe opposing values. Although some of the questions may seem unusual, for each pair, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. Rate your feelings about the trademark above by marking on the scale.

Aggressive

Aggressive to Conservative

○ ○ ○ ○ ○ ○ ○ ○ ○

Conservative

2. Rate your feelings about the trademark above by marking on the scale.

Dependable

Dependable to Visionary

○ ○ ○ ○ ○ ○ ○ ○ ○

Visionary

3. Rate your feelings about the trademark above by marking on the scale.

Cautious

Cautious to Effective

○ ○ ○ ○ ○ ○ ○ ○ ○

Effective

4. Rate your feelings about the trademark above by marking on the scale.

Old-Fashioned

Old-Fashioned to Progressive

○ ○ ○ ○ ○ ○ ○ ○ ○

Progressive

5. Emotional Response

Rate your emotional response to a company's trademark logo. You will be given groups of adjectives that describe opposing emotions. Although some of the questions may seem unusual, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5	
Unhappy Annoyed Unsatisfied Melancholic Despairing Bored						Happy Pleased Satisfied Contented Hopeful Relaxed

2. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5	
Relaxed Calm Sluggish Dull Sleepy Unaroused						Stimulated Excited Frenzied Jittery Wideawake Aroused

3. How does the trademark above make you feel?

Emotional Response

1 2 3 4 5

Controlled Influenced Cared for Awed Submissive Guided

1 2 3 4 5

Controlling Influential In control Important Dominant Autonomous

6. Company Values

Rate what you think the company is trying to communicate with their trademark. You will be given a pair of adjectives that describe opposing values. Although some of the questions may seem unusual, for each pair, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. Rate your feelings about the trademark above by marking on the scale.

Aggressive to Conservative

2. Rate your feelings about the trademark above by marking on the scale.

Dependable Visionary

Dependable to Visionary

A horizontal scale bar with a light gray background. At the left end is the word 'Dependable' and at the right end is the word 'Visionary'. Eight small, white, stylized person icons are evenly spaced along the bar. The first icon is positioned directly under the word 'Dependable'.

3. Rate your feelings about the trademark above by marking on the scale.

How **cautious** or **effective** do you think the **admission process** is for **marking on the scale**?

Cautious Effective

Cautious to Effective

4. Rate your feelings about the trademark above by marking on the scale.

Old-Fashioned Progressive

Old-Fashioned to Progressive

7. Emotional Response

Rate your emotional response to a company's trademark logo. You will be given groups of adjectives that describe opposing emotions. Although some of the questions may seem unusual, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
Unhappy Annoyed Unsatisfied Melancholic Despairing Bored					
					Happy Pleased Satisfied Contented Hopeful Relaxed

2. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
Relaxed Calm Sluggish Dull Sleepy Unaroused					
					Stimulated Excited Frenzied Jittery Wideawake Aroused

3. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
Controlled Influenced Cared for Awed Submissive Guided					
					Controlling Influential In control Important Dominant Autonomous

8. Company Values

Rate what you think the company is trying to communicate with their trademark. You will be given a pair of adjectives that describe opposing values. Although some of the questions may seem unusual, for each pair, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. Rate your feelings about the trademark above by marking on the scale.

	Aggressive								Conservative
Aggressive to Conservative	☐	☐	☐	☐	☐	☐	☐	☐	☐

2. Rate your feelings about the trademark above by marking on the scale.

	Dependable								Visionary
Dependable to Visionary	☐	☐	☐	☐	☐	☐	☐	☐	☐

3. Rate your feelings about the trademark above by marking on the scale.

	Cautious								Effective
Cautious to Effective	☐	☐	☐	☐	☐	☐	☐	☐	☐

4. Rate your feelings about the trademark above by marking on the scale.

	Old-Fashioned								Progressive
Old-Fashioned to Progressive	☐	☐	☐	☐	☐	☐	☐	☐	☐

9. Emotional Response

Rate your emotional response to a company's trademark logo. You will be given groups of adjectives that describe opposing emotions. Although some of the questions may seem unusual, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. How does the trademark above make you feel?

	1	2	3	4	5	
Emotional Response	☐	☐	☐	☐	☐	
	Unhappy Annoyed Unsatisfied Melancholic Despairing Bored					Happy Pleased Satisfied Contented Hopeful Relaxed

2. How does the trademark above make you feel?

	1	2	3	4	5
Emotional Response	☐	☐	☐	☐	☐

3. How does the trademark above make you feel?

Emotional Response

1

2

3

4

5

Controlled
Influenced
Cared for
Awed
Submissive
Guided

Stimulated
Excited
Frenzied
Jittery
Wideawake
Aroused

Controlling
Influential
In control
Important
Dominant
Autonomous

10. Company Values

Rate what you think the company is trying to communicate with their trademark. You will be given a pair of adjectives that describe opposing values. Although some of the questions may seem unusual, for each pair, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. Rate your feelings about the trademark above by marking on the scale.

Aggressive	Conservative
Aggressive to Conservative	

2. Rate your feelings about the trademark above by marking on the scale.

Dependable	Visionary
Dependable to Visionary	

3. Rate your feelings about the trademark above by marking on the scale.

Cautious	Effective
Cautious to Effective	

4. Rate your feelings about the trademark above by marking on the scale.

Old-Fashioned	Progressive
Old-Fashioned to Progressive	

11. Emotional Response

Rate your emotional response to a company's trademark logo. You will be given groups of adjectives that describe opposing emotions. Although some of the questions may seem unusual, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
Unhappy Annoyed Unsatisfied Melancholic Despairing Bored					
	1	2	3	4	5
Happy Pleased Satisfied Contented Hopeful Relaxed

2. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
Relaxed Calm Sluggish Dull Sleepy Unaroused					
	1	2	3	4	5
Stimulated Excited Frenzied Jittery Wideawake Aroused

3. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
Controlled Influenced Cared for Awed Submissive Guided					
	1	2	3	4	5
Controlling Influential In control Important Dominant Autonomous

2. How does the trademark above make you feel?

Emotional Response

1 2 3 4 5

Relaxed
Calm
Sluggish
Dull
Sleepy
Unaroused

1 2 3 4 5

Stimulated
Excited
Frenzied
Jittery
Wideawake
Agitated

3. How does the trademark above make you feel?

Emotional Response

1 2 3 4 5

Controlled Influenced Cared for Awed Submissive Guided

1 2 3 4 5

Controlling Influential In control Important Dominant Autonomous

14. Company Values

Rate what you think the company is trying to communicate with their trademark. You will be given a pair of adjectives that describe opposing values. Although some of the questions may seem unusual, for each pair, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. Rate your feelings about the trademark above by marking on the scale.

	Aggressive									Conservative
Aggressive to Conservative	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

2. Rate your feelings about the trademark above by marking on the scale.

	Dependable									Visionary
Dependable to Visionary	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

3. Rate your feelings about the trademark above by marking on the scale.

	Cautious									Effective
Cautious to Effective	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

4. Rate your feelings about the trademark above by marking on the scale.

	Old-Fashioned									Progressive
Old-Fashioned to Progressive	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

15. Emotional Response

Rate your emotional response to a company's trademark logo. You will be given groups of adjectives that describe opposing emotions. Although some of the questions may seem unusual, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. How does the trademark above make you feel?

	1	2	3	4	5	
Emotional Response	☐	☐	☐	☐	☐	
Unhappy Annoyed Unsatisfied Melancholic Despairing Bored	 1	 2	 3	 4	 5	Happy Pleased Satisfied Contented Hopeful Relaxed

2. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
Relaxed Calm Sluggish Dull Sleepy Unaroused
					Stimulated Excited Frenzied Jittery Wideawake Aroused

3. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5

Controlled
Influenced
Cared for
Awed
Submissive
Guided

Controlling
Influential
In control
Important
Dominant
Autonomous

16. Company Values

Rate what you think the company is trying to communicate with their trademark. You will be given a pair of adjectives that describe opposing values. Although some of the questions may seem unusual, for each pair, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. Rate your feelings about the trademark above by marking on the scale.

	Aggressive								Conservative
Aggressive to Conservative	☐	☐	☐	☐	☐	☐	☐	☐	☐

2. Rate your feelings about the trademark above by marking on the scale.

	Dependable								Visionary
Dependable to Visionary	☐	☐	☐	☐	☐	☐	☐	☐	☐

3. Rate your feelings about the trademark above by marking on the scale.

	Cautious								Effective
Cautious to Effective	☐	☐	☐	☐	☐	☐	☐	☐	☐

4. Rate your feelings about the trademark above by marking on the scale.

	Old-Fashioned								Progressive
Old-Fashioned to Progressive	☐	☐	☐	☐	☐	☐	☐	☐	☐

17. Emotional Response

Rate your emotional response to a company's trademark logo. You will be given groups of adjectives that describe opposing emotions. Although some of the questions may seem unusual, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. How does the trademark above make you feel?

	1	2	3	4	5
Emotional Response	☐	☐	☐	☐	☐

Unhappy
Annoyed
Unsatisfied
Melancholic
Despairing
Bored

Happy
Pleased
Satisfied
Contented
Hopeful
Relaxed

2. How does the trademark above make you feel?

Emotional Response

1 2 3 4 5

Relaxed
Calm
Sluggish
Dull
Sleepy
Unaroused

1 2 3 4 5

Stimulated
Excited
Frenzied
Jittery
Wideawake
Aroused

3. How does the trademark above make you feel?

Emotional Response

1 2 3 4 5

Controlled
Influenced
Cared for
Awed
Submissive
Guided

1 2 3 4 5

Controlling
Influential
In control
Important
Dominant
Autonomous

18. Company Values

Rate what you think the company is trying to communicate with their trademark. You will be given a pair of adjectives that describe opposing values. Although some of the questions may seem unusual, for each pair, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. Rate your feelings about the trademark above by marking on the scale.

Aggressive to Conservative

Aggressive

1 2 3 4 5

Conservative

2. Rate your feelings about the trademark above by marking on the scale.

Dependable to Visionary

Dependable

1 2 3 4 5

Visionary

3. Rate your feelings about the trademark above by marking on the scale.

Cautious to Effective

Cautious

1 2 3 4 5

Effective

4. Rate your feelings about the trademark above by marking on the scale.

Old-Fashioned to Progressive

Old-Fashioned

1 2 3 4 5

Progressive

19. Emotional Response

Rate your emotional response to a company's trademark logo. You will be given groups of adjectives that describe opposing emotions. Although some of the questions may seem unusual, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
Unhappy Annoyed Unsatisfied Melancholic Despairing Bored	1	2	3	4	5
					Happy Pleased Satisfied Contented Hopeful Relaxed

2. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
Relaxed Calm Sluggish Dull Sleepy Unaroused	1	2	3	4	5
					Stimulated Excited Frenzied Jittery Wideawake Aroused

3. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
Controlled Influenced Cared for Awed Submissive Guided	1	2	3	4	5
					Controlling Influential In control Important Dominant Autonomous

20. Company Values

Rate what you think the company is trying to communicate with their trademark. You will be given a pair of adjectives that describe opposing values. Although some of the questions may seem unusual, for each pair, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. Rate your feelings about the trademark above by marking on the scale.

	Aggressive								Conservative
Aggressive to Conservative	☐	☐	☐	☐	☐	☐	☐	☐	☐

2. Rate your feelings about the trademark above by marking on the scale.

	Dependable								Visionary
Dependable to Visionary	☐	☐	☐	☐	☐	☐	☐	☐	☐

3. Rate your feelings about the trademark above by marking on the scale.

	Cautious								Effective
Cautious to Effective	☐	☐	☐	☐	☐	☐	☐	☐	☐

4. Rate your feelings about the trademark above by marking on the scale.

	Old-Fashioned								Progressive
Old-Fashioned to Progressive	☐	☐	☐	☐	☐	☐	☐	☐	☐

21. Emotional Response

Rate your emotional response to a company's trademark logo. You will be given groups of adjectives that describe opposing emotions. Although some of the questions may seem unusual, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. How does the trademark above make you feel?

	1	2	3	4	5
Emotional Response	☐	☐	☐	☐	☐
Unhappy Annoyed Unsatisfied Melancholic Despairing Bored	1 	2 	3 	4 	5
					Happy Pleased Satisfied Contented Hopeful Relaxed

2. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
Relaxed Calm Sluggish Dull Sleepy Unaroused
					Stimulated Excited Frenzied Jittery Wideawake Aroused

3. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5

Controlled
Influenced
Cared for
Awed
Submissive
Guided

1

2

3

4

5

Controlling
Influential
In control
Important
Dominant
Autonomous

22. Company Values

Rate what you think the company is trying to communicate with their trademark. You will be given a pair of adjectives that describe opposing values. Although some of the questions may seem unusual, for each pair, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. Rate your feelings about the trademark above by marking on the scale.

Aggressive to Conservative	Aggressive	☐	☐	☐	☐	☐	☐	☐	☐	Conservative
----------------------------	------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	--------------

2. Rate your feelings about the trademark above by marking on the scale.

Dependable to Visionary	Dependable	☐	☐	☐	☐	☐	☐	☐	☐	Visionary
-------------------------	------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------

3. Rate your feelings about the trademark above by marking on the scale.

Cautious to Effective	Cautious	☐	☐	☐	☐	☐	☐	☐	☐	Effective
-----------------------	----------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------

4. Rate your feelings about the trademark above by marking on the scale.

Old-Fashioned to Progressive	Old-Fashioned	☐	☐	☐	☐	☐	☐	☐	☐	Progressive
------------------------------	---------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-------------

23. Emotional Response

Rate your emotional response to a company's trademark logo. You will be given groups of adjectives that describe opposing emotions. Although some of the questions may seem unusual, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5	
	☐	☐	☐	☐	☐	
	Unhappy Annoyed Unsatisfied Melancholic Despairing Bored					Happy Pleased Satisfied Contented Hopeful Relaxed

2. How does the trademark above make you feel?

Emotional Response

1 2 3 4 5

Relaxed
Calm
Sluggish
Dull
Sleepy
Unaroused

1 2 3 4 5

Stimulated
Excited
Frenzied
Jittery
Wideawake
Aroused

3. How does the trademark above make you feel?

Emotional Response

1 2 3 4 5

Controlled
Influenced
Cared for
Awed
Submissive
Guided

1 2 3 4 5

Controlling
Influential
In control
Important
Dominant
Autonomous

24. Company Values

Rate what you think the company is trying to communicate with their trademark. You will be given a pair of adjectives that describe opposing values. Although some of the questions may seem unusual, for each pair, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. Rate your feelings about the trademark above by marking on the scale.

Aggressive

Aggressive to Conservative

1 2 3 4 5

2. Rate your feelings about the trademark above by marking on the scale.

Dependable

Dependable to Visionary

1 2 3 4 5

3. Rate your feelings about the trademark above by marking on the scale.

Cautious

Cautious to Effective

1 2 3 4 5

4. Rate your feelings about the trademark above by marking on the scale.

Old-Fashioned

Old-Fashioned to Progressive

1 2 3 4 5

25. Emotional Response

Rate your emotional response to a company's trademark logo. You will be given groups of adjectives that describe opposing emotions. Although some of the questions may seem unusual, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
	☐	☐	☐	☐	☐
Unhappy Annoyed Unsatisfied Melancholic Despairing Bored
					Happy Pleased Satisfied Contented Hopeful Relaxed

2. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
	☐	☐	☐	☐	☐
Relaxed Calm Sluggish Dull Sleepy Unaroused
					Stimulated Excited Frenzied Jittery Wideawake Aroused

3. How does the trademark above make you feel?

Emotional Response	1	2	3	4	5
	☐	☐	☐	☐	☐
Controlled Influenced Cared for Awed Submissive Guided
					Controlling Influential In control Important Dominant Autonomous

26. Company Values

Rate what you think the company is trying to communicate with their trademark. You will be given a pair of adjectives that describe opposing values. Although some of the questions may seem unusual, for each pair, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. Rate your feelings about the trademark above by marking on the scale.

	Aggressive									Conservative
Aggressive to Conservative	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

2. Rate your feelings about the trademark above by marking on the scale.

	Dependable									Visionary
Dependable to Visionary	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

3. Rate your feelings about the trademark above by marking on the scale.

	Cautious									Effective
Cautious to Effective	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

4. Rate your feelings about the trademark above by marking on the scale.

	Old-Fashioned									Progressive
Old-Fashioned to Progressive	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

27. Emotional Response

Rate your emotional response to a company's trademark logo. You will be given groups of adjectives that describe opposing emotions. Although some of the questions may seem unusual, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. How does the trademark above make you feel?

	1	2	3	4	5
Emotional Response	☐	☐	☐	☐	☐
Unhappy Annoyed Unsatisfied Melancholic Despairing Bored	1	2	3	4	5
					Happy Pleased Satisfied Contented Hopeful Relaxed

2. How does the trademark above make you feel?

3. How does the trademark above make you feel?

28. Company Values

Rate what you think the company is trying to communicate with their trademark. You will be given a pair of adjectives that describe opposing values. Although some of the questions may seem unusual, for each pair, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. Rate your feelings about the trademark above by marking on the scale.

	Aggressive									Conservative
Aggressive to Conservative	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

2. Rate your feelings about the trademark above by marking on the scale.

	Dependable									Visionary
Dependable to Visionary	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

3. Rate your feelings about the trademark above by marking on the scale.

	Cautious									Effective
Cautious to Effective	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

4. Rate your feelings about the trademark above by marking on the scale.

	Old-Fashioned									Progressive
Old-Fashioned to Progressive	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

29. Emotional Response

Rate your emotional response to a company's trademark logo. You will be given groups of adjectives that describe opposing emotions. Although some of the questions may seem unusual, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. How does the trademark above make you feel?

	1	2	3	4	5	
Emotional Response	☐	☐	☐	☐	☐	
	Unhappy Annoyed Unsatisfied Melancholic Despairing Bored	1	2	3	4	5 Happy Pleased Satisfied Contented Hopeful Relaxed

2. How does the trademark above make you feel?

Emotional Response

1 2 3 4 5

Relaxed
Calm
Sluggish
Dull
Sleepy
Unaroused

1 2 3 4 5

Stimulated
Excited
Frenzied
Jittery
Wideawake
Aroused

3. How does the trademark above make you feel?

Emotional Response

1 2 3 4 5

Controlled
Influenced
Cared for
Awed
Submissive
Guided

1 2 3 4 5

Controlling
Influential
In control
Important
Dominant
Autonomous

30. Company Values

Rate what you think the company is trying to communicate with their trademark. You will be given a pair of adjectives that describe opposing values. Although some of the questions may seem unusual, for each pair, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. Rate your feelings about the trademark above by marking on the scale.

Aggressive to Conservative

Aggressive

1 2 3 4 5

Conservative

2. Rate your feelings about the trademark above by marking on the scale.

Dependable to Visionary

Dependable

1 2 3 4 5

Visionary

3. Rate your feelings about the trademark above by marking on the scale.

Cautious to Effective

Cautious

1 2 3 4 5

Effective

4. Rate your feelings about the trademark above by marking on the scale.

Old-Fashioned to Progressive

Old-Fashioned

1 2 3 4 5

Progressive

31. Emotional Response

Rate your emotional response to a company's trademark logo. You will be given groups of adjectives that describe opposing emotions. Although some of the questions may seem unusual, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. How does the trademark above make you feel?

	1	2	3	4	5	
Emotional Response	☐	☐	☐	☐	☐	
Unhappy Annoyed Unsatisfied Melancholic Despairing Bored	1	2	3	4	5	Happy Pleased Satisfied Contented Hopeful Relaxed

2. How does the trademark above make you feel?

	1	2	3	4	5	
Emotional Response	☐	☐	☐	☐	☐	
Relaxed Calm Sluggish Dull Sleepy Unaroused	1	2	3	4	5	Stimulated Excited Frenzied Jittery Wideawake Aroused

3. How does the trademark above make you feel?

Emotional Response

1 2 3 4 5

Controlled
Influenced
Cared for
Awed
Submissive
Guided

1 2 3 4 5

Controlling
Influential
In control
Important
Dominant
Autonomous

32. Company Values

Rate what you think the company is trying to communicate with their trademark. You will be given a pair of adjectives that describe opposing values. Although some of the questions may seem unusual, for each pair, mark the survey close to the adjective which you believe describes your reaction to the trademark better. The more appropriate the adjective seems, the closer you should put your check mark to it.

1. Rate your feelings about the trademark above by marking on the scale.

Aggressive to Conservative

2. Rate your feelings about the trademark above by marking on the scale.

Dependable to Visionary

3. Rate your feelings about the trademark above by marking on the scale.

How *your feelings* about the defendant's *story* marking on the scale:

Cautious Cautious to Effective Effective

Cautious to Effective

4. Rate your feelings about the trademark above by marking on the scale.

Old-Fashioned Progressive

Old-Fashioned to Progressive

33. Subject-Content Compatability

1. Match the industry to the company trademark.

	3a	3b	3c	3d	3e	3f	3g	3h	3i	3j	3k	3l	3m	3n	3o
Billiards (Pool)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Documentary Films	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Consumer Protection	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Engraving	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Free Email Service	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Home Wiring	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Indian Restaurant	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Library	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Men's Shirts	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Office Supplies	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Online Wine Shop	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Private Military	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Rehabilitation and Physical Therapy	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Worker's Safety	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Zoo	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

34. Subject-Content Compatability - Company Names

1. Match the company name to the company trademark.

	3a	3b	3c	3d	3e	3f	3g	3h	3i	3j	3k	3l	3m	3n	3o
Anchor Engraving	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Blackhawk Logistics	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
BNS Office Supplies	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Consumer Protection Agency	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Duck Shot Restaurant	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Electro Domestici	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Library of Congress	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Open Mail	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Pittsburgh Zoo	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Rehabilitation Hospital of America	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Safeguard	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Snooker	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Tulip Films	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Wine Searcher	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Yonca Moda Shirts	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

35. Demographics

1. What is the current time?

Time: ^{HH} : ^{MM} ^{AM/PM}

2. Demographic Information

What is your current age?

What is your major at school? (enter 'none' if not a student)

3. What is your current educational year at school?

- ☐ Pre-Freshman
- ☐ Freshman
- ☐ Sophomore
- ☐ Junior
- ☐ Senior
- ☐ Master's Degree
- ☐ Faculty Participant
- ☐ Open-University
- ☐ Non-Student

4. If you answered "Faculty Participant," "Open-University," or "Non-Student" to the above question regarding Educational Year, enter the highest grade level completed in your education:

5. What is your race/ethnicity (choose as many as are applicable):

- ☐ Hispanic, Latino, or Spanish
- ☐ White
- ☐ Asian (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)
- ☐ Black/African American
- ☐ American Indian (North, Central, or South American) or Alaskan Native
- ☐ Native Hawaiian
- ☐ Other Pacific Islander
- ☐ Other

6. If you answered "Other" to the above question regarding Race/Ethnicity, describe:

7. Identify your handedness.

- ☐ Right-Handed
- ☐ Left-Handed
- ☐ Ambidextrous (using both hands with equal ease)

8. Employment Information: If employed:

Enter job title or description:

Enter hours per week:

Enter employer:

9. Housing Information: Select the answer that best represent your residence (for students, select the answer that best represents your residence during the school year).

- ☐ Home with family (e.g., parents, grandparents)
☐ On-campus housing (e.g., residence hall, dormitory, apartment)
☐ Fraternity or sorority house
☐ Off-campus housing alone
☐ Off-campus housing with roommate(s) (not relatives)
☐ Other

10. If you answered "Other" to the above question regarding Housing, describe:

11. Educational Experience in Art and Design: (check as many as apply or applied to you when you were a student)

- ☐ art/design major
☐ art/design minor
☐ taken multiple classes in art/design
☐ taken a single class in art/design
☐ taken no classes in art/design

12. Interest in Art and Design: (this question applies to your interest in the subject, not if you actively participate)

	Not Interested			Somewhat Interested		Very Interested
Painting	☐		☐		☐	☐
Sculpture	☐		☐		☐	☐
Drawing	☐		☐		☐	☐
Graphic Design	☐		☐		☐	☐
Animation Design	☐		☐		☐	☐
Game Design	☐		☐		☐	☐
Architectural Design	☐		☐		☐	☐
Interior Design	☐		☐		☐	☐
Fashion Design	☐		☐		☐	☐

13. Participation in Art and Design: (this question applies to how often you actively participate in the subject)

	Never or Rarely	Yearly	Monthly	Weekly	Daily
Painting	☐	☐	☐	☐	☐
Sculpture	☐	☐	☐	☐	☐
Drawing	☐	☐	☐	☐	☐
Graphic Design	☐	☐	☐	☐	☐
Animation Design	☐	☐	☐	☐	☐
Game Design	☐	☐	☐	☐	☐
Architectural Design	☐	☐	☐	☐	☐
Interior Design	☐	☐	☐	☐	☐
Fashion Design	☐	☐	☐	☐	☐

36. Recall

Recall the trademarks that have been on the test.

1. Was the logo above on today's test?

Definitely not on
today's test

Probably not on
today's test

I don't know

Probably on today's
test

Definitely on today's
test

1.

2. Was the logo above on today's test?

Definitely not on
today's test

Probably not on
today's test

I don't know

Probably on today's
test

Definitely on today's
test

2.

3. Was the logo above on today's test?

Definitely not on
today's test

Probably not on
today's test

I don't know

Probably on today's
test

Definitely on today's
test

3.

4. Was the logo above on today's test?

Definitely not on
today's test

Probably not on
today's test

I don't know

Probably on today's
test

Definitely on today's
test

4.

5. Was the logo above on today's test?

5. ☐ Definitely not on today's test ☐ Probably not on today's test ☐ I don't know ☐ Probably on today's test ☐ Definitely on today's test

6. Was the logo above on today's test?

6. ☐ Definitely not on today's test ☐ Probably not on today's test ☐ I don't know ☐ Probably on today's test ☐ Definitely on today's test

7. Was the logo above on today's test?

7. ☐ Definitely not on today's test ☐ Probably not on today's test ☐ I don't know ☐ Probably on today's test ☐ Definitely on today's test

8. Was the logo above on today's test?

8.

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11

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C

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12

○

○

C

Definitely not on today's test

Probably not on today's test

I don't know

Probably on today's
test

Definitely on today's
test

13.

Definitely not on
today's test

Probably not on
today's test

I don't know

Probably on today's
test

Definitely on today's
test

14.

Definitely not on
today's test

Probably not on
today's test

I don't know

Probably on today's
test

Definitely on today's
test

15.

Definitely not on
today's test

Probably not on
today's test

I don't know

Probably on today's
test

Definitely on today's
test

16.

17. Was the logo above on today's test?

	Definitely not on today's test		Probably not on today's test		I don't know		Probably on today's test		Definitely on today's test
17.	☐	☐	☐	☐	☐	☐	☐	☐	☐

18. Was the logo above on today's test?

	Definitely not on today's test		Probably not on today's test		I don't know		Probably on today's test		Definitely on today's test
18.	☐	☐	☐	☐	☐	☐	☐	☐	☐

19. Was the logo above on today's test?

	Definitely not on today's test		Probably not on today's test		I don't know		Probably on today's test		Definitely on today's test
19.	☐	☐	☐	☐	☐	☐	☐	☐	☐

20. Was the logo above on today's test?

	Definitely not on today's test		Probably not on today's test		I don't know		Probably on today's test		Definitely on today's test
20.	☐	☐	☐	☐	☐	☐	☐	☐	☐

21. Was the logo above on today's test?

Definitely not on today's test Probably not on today's test I don't know Probably on today's test Definitely on today's test

21. ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

22. Was the logo above on today's test?

Definitely not on today's test Probably not on today's test I don't know Probably on today's test Definitely on today's test

22. ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

23. Was the logo above on today's test?

Definitely not on today's test Probably not on today's test I don't know Probably on today's test Definitely on today's test

23. ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

24. Was the logo above on today's test?

Definitely not on today's test Probably not on today's test I don't know Probably on today's test Definitely on today's test

24. ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

29.

30. Was the logo above on today's test?

	Definitely not on today's test	Probably not on today's test	I don't know	Probably on today's test	Definitely on today's test
30.	☐	☐	☐	☐	☐

31. What is the current time?

Time:

HH	MM	AM/PM
<input type="text"/>	<input type="text"/>	<input type="text"/>