

Title: Design Principles in Logos: Analysis of Cognitive Resonance on Logos

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Abstract: Logo Design plays a crucial role in establishing a brand's identity and fostering consumers' recognition. However, despite countless logos that have been made over the years, only a handful of brands stood out to the crowd. While art and design are subjective, the problem is that the majority of logo designs struggle from inconsistent design elements application or a lack of understanding of design principles, which results in a lack of consensus on how these elements and principles should be strategically applied when designing a logo to stand out both aesthetically and marketably in the brand department. Thus, this research aims to understand how the concept of recognition of logo design was effectively communicated with design principles and elements and how they influenced people's visual cognition of certain logo designs. The research has surveyed with 63 respondents, gathering insights and perspectives about each element that accurately portrays their roles within the design principle. The research has been concluded that it is a use of the strategic harmony of plenty of design elements that align with design principles, rather than isolating just one standout element and one principle through logo design.

Keywords: Element, Principle, Recognition, Recall

Introduction: Logo designs play an important role in establishing brand identity and stimulating consumer recognition. Thus, this research aims to understand how the concept of recognizable logos were effectively communicated with design principles and elements and how they influenced people's visual cognition of logo designs. As demonstrated through this study, many different logo designs utilize similar design elements to communicate different principles that make the logo design timeless and recognizable in the consumers' perspective.

Lines were used not only used for decorative purposes, but also the viewers' guide to create a focal point for the design. Shapes and forms are used to balance between visual structures and expression. The correct use of colors and values can set a memorable visual mood and depth. The careful arrangement of spacing can create a bigger emphasis within a composition in a single logo.

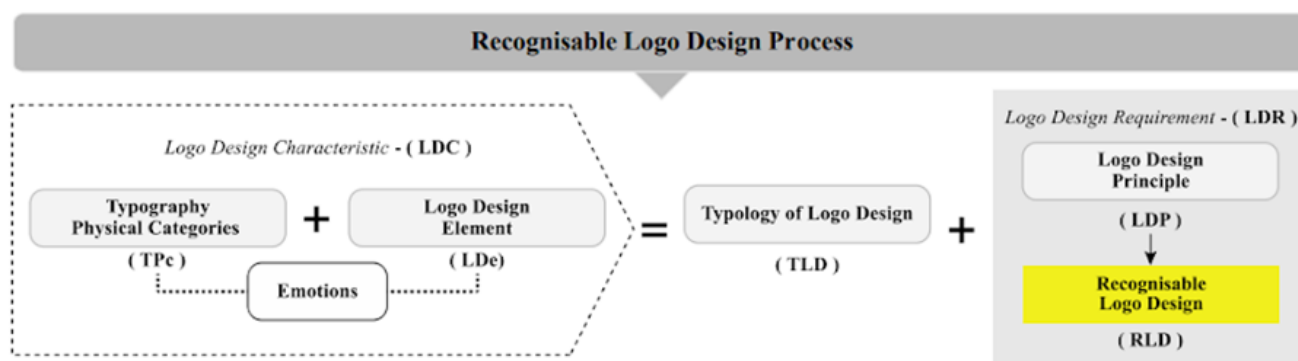


Figure 1 Recognisable Logo Design Process by Johari (2019)

Problem Statement: Logo designs play an important role in establishing brand identity and stimulating consumer recognition. However, while it's been established that brands use their logo designs to create a suitable visual identity

to resonate their consumers, there has been little scientific evidence to suggest which elements objectively communicate each design principle to contribute the effectiveness of visual identity. This study will look at not only consumers' point of view of logo designs' elements and principle, but also utilize the visual aspects of the logo designs. Thus, this research aims to understand how the concept of recognizable logos were effectively communicated with design principles and elements and how they influenced people's visual cognition of logo designs.

The objective for this research was to analyze case studies of successful logos to identify common design principles that contribute the brand identity reflection, while also evaluating the effectiveness of logo designs when it comes to cognitive resonance of the audience with different demographics through a quantitative survey study. With these objectives comes to mind, the research question is "How do different design elements contribute to the creation of logos that effectively communicate a brand's identity with design principles?" and "How do variations of design principles influence consumer preferences and emotional responses towards logos?"



Figure 2 Color Emotion Guide for Logos by logocompany.net

Methodology: The research method for this study starts with a quantitative study of survey results was used in this study to convey the data based on the respondent's perspective on design elements and principles that would develop more recognition and recalls of logo designs. The study has examined a variety of design elements such lines, shapes, colors and space to explore timeless logo designs and elements' similarity to convey different principles that leave a lot of recognition and resonance amongst the respondents. With the right amount of target demographic, this method can further examine the role of design elements.

A total of 63 individuals participated in the survey. The survey design incorporates demographic formats such as gender and age of the respondents. This is essential to provide perspective and context for the results. Its questions mostly formed in a group of each design elements (Typography, Shapes & Forms, Space, Colors & Values and Lines) and respondents would answer the significance or preference of the design elements and which specific logos has a great representation to showcase the design elements. The indication of the survey sample is available at appendix 1.

It's considerate to put logos as sampling to experiment the respondents' cognitive preferences and emotional responses. The target audience for this survey is the general public. The reason is that the general public is a much approachable option for respondents to answer the survey in the most engaging and honest way.

These questions are for respondents based on the effectiveness of each element of design in logos. These design elements are as follows: "Line, shape, form, value, color, space, texture, and typeface." (Tomita, 2015), followed by the outcome design principles are as follows: "balance, unity, proximity, contrast, emphasis, alignment and movement" (Tomika, 2015) These frameworks provided the basis for measuring respondents' perceptions and helped form the foundation for interpreting how design choices influence the recognition and impact of logos. Overall, this method provided structured and focused insights into the public's aesthetic and cognitive responses to logo design.

Findings and Discussion (500 words):

Lines is used in curved, horizontal, vertical or diagonal, all act as visual cues to communicate distinct representation. For example, Coca Cola used its curved line to define the logo design's movement and gentle rhythm, IBM's horizontal lines are meant to define calmness,, SoundCloud's vertical lines convey strength, and EA's diagonal lines adds a dynamic energy and tension. (Mohamed, 2023). Survey results showed relatively mixed preferences in line traits, such as alignment, movement, space, and balance scoring evenly (22.2%–27.5%), suggesting there are no single dominant trait within consumers' perspective and consumers' prefer a much universal design approach. Thus, designers should consider how line characteristics interact with logo designs. For example, EA uses broken diagonal lines to emphasize alignment and proximity between letters, which persuades viewers' ability to recall and memorize the proximity and a single alignment between two letters with a diagonal line and a recognition of the diagonal movement between two letters. (Lencastre, 2023).

The visual structures are used in geometric shapes or organic forms in a logo design. The survey supports that symmetrical balance of shapes or forms are much preferred (44.4%) over alignment (36.5%) and contrast (19%). Additionally, more than half of respondents (50.8%) preferred symmetrical shapes, showing strong audience preference for balanced visual design in logos. As demonstrated in Mastercard, Audi and Olympics logo by Mohamed (2023) , their use of close proximity, symmetric placements with the repetitive use of circles have created balance and visual harmony, represents a direct attention for the audiences' recall and recognition. (Mohamed, 2023 ; Lencastre, 2023)

Colors and values in logos was universally agreed upon to be affecting the logo design emotionally (92.1%), with most respondents (69.3%) prefer brighter colors over darker colors. As for the respondent's preferred colors, Red and Grey are tied being the most popular choice, garnered around 27%. The survey also include infographic featured in logocompany.net to let respondents understand the purpose of colors. For example, red represents excitement and bold, whereas the use of white and black represents balance and calmness. While the results are relatively mixed and different colors can achieve different mental cues, displayed by the infographic, respondents seemed to have an easier time to identify and memorize the colors of red, white and black, with Mohamed (2023) great suggests Coca Cola's predominantly red as the primary color evokes the vibrance and excitement for the brand. Given the survey results, these color traits and symbolism seemingly a definite way to enhance the recall and recognition of logo designs.

Space plays a fundamental role and an active design tool that influences the logos' structure, alignment and flow. Through careful arrangement, this helps designers to guide the viewer's attention, creating emphasis within a composition. Negative space can be used depending on the closeness or distance between elements, as it can draw components together visually. When elements placed close together, they are perceived together as a same group. For example, Mastercard logos' close proximity between circles create a focal point where they are perceived as the same element altogether. In the survey, 80% of respondents agreed that the correct use of space of objects and negative space can improve the logo's focal point and respondent's visual focus. Mohammed (2023) has demonstrated that Audi (along with Olympics and Mastercard) have defined the figure, which are the intersecting circles into the white background, as Audi's created the negative space by the 4 interlocking rings to create a repetitive, yet recognizable rhythm.

Conclusion: The main goal for this research is to discover the main role of both design elements and principles that contribute to logo design and how these seemingly small but critical visual purposes can influence people's cognitive perspective. However, it has been proven that through theoretical analysis, comparative case studies of logo designs, and a targeted survey of 63 respondents, it becomes evident that no single element can singularly define a logo's effectiveness. Rather, it is a use of the strategic harmony of plenty of design elements that aligned with design principles. This has proven collectively to create logos of forging strong connection with the cognitive view of consumers.

In the case of consumers' perspectives on lines in logos, the survey shows that it is evenly distributed across traits such as alignment, space, balance, and movement. This shows that lines in general do not isolate in one characteristic, thanks to different line structures that served effectively as visual cues.

Similarly, in shapes and forms, survey results showed a strong preference for symmetrical over asymmetrical or overly complex organic shapes. The results led to a conclusion that overly distorted shapes were found to hinder clarity and disrupt harmony, ultimately making logos more difficult to recognize or recall. The findings do affirm the importance of structure in visual cognition.

The survey results affirm that colors and values together are a powerful and versatile tool. Respondents have been shown that they acknowledge the subtle contrast or brightness does play a role for logo designs. That said, most respondents prefer brighter colors for logos to stand out.

The element of space also proved to be critical in organizing visual hierarchy and creating emphasis. Respondents agreed that effective use of space and negative space improves logo clarity and focus, but also preferred closely attached objects, which further proves the proximity discussed in design principles. While it can be argued that wide spacing still holds a place in specific brand strategies aimed at sophistication, there has been little to no further evidence or design to suggest that this is an effective way to communicate the brand to the audience.

Addressing the limitation of the research, future studies should aim for a broader research. The survey only had 63 respondents with similar background and ages, which limits the survey from determining and generalizing findings. Since logo design is an inherently subjective perspective, further qualitative studies such as interviews and individual feedback could offer deeper insights. The study relied heavily on limited examples and one primary source (Mohamed, 2023), which sometimes reduce the variety and depth of analysis. Future research should acknowledge more on their business sector of the logo, since this would help understand the origins of the brand in a comprehensive manner. Lastly, inconsistencies in survey questions and responses highlight the need for clearer, more structured data collection to leave no ambiguity and ensure the data are much more accurate.

All in all, the research has concluded that the most effective logos are those that blend visual clarity with design element and design principles for consumers' emotional resonance. By doing so, logos become more than just identifiers—they become symbols that are instantly recognized and effortlessly recalled and recognized by many, forming lasting visual resonance and impressions in the minds of consumers. In today's visually saturated world, achieving this balance is not just a creative goal but a strategic necessity for meaningful brand communication.

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Figure 1 Recognisable Logo Design Process by Johari (2019)

<https://doi.org/10.18535/ijssrm/v7i5.sh01>

Figure 2 Color Emotion Guide for Logos by *logocompany.net*

<https://thelogocompany.net/psychology-of-color-in-logo-design/>

Appendices:

Questions Responses **63** Settings

The impact of design principles to create a logo that reflects the brand's identity.

B I U ↺ ✖

Dear Sir/Madam,

Hi there! I am Khan Saif, and have been currently studying at Bachelor of Design of Creative Media from Taylor's University. This survey is specifically for my **Design Research Methodology (RES60604)** module as part of my research assignment, so to those who have received the QR code for this link, let me start by saying thank you so much for participating in this quiz to help with my research.

The goal of this survey is to analyze cases of successful logos across various industries to identify common design principles that contribute to brand identity reflection and evaluate the effectiveness of logo designs with cognitive resonance.

This survey should around 10 minutes to finish. Again, thank you so much for willing to participate as the survey's respondent, your contribution is greatly appreciated!

Appendix 1: "The impact of Design Principle" survey sample