

The Truth about Good and Evil: A Mixed-Methods Approach to Color Theory

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Abstract—The color theory of good and evil is the association of colors to the omnipresent concept of good and evil, where human behavior and perception can be highly influenced by seeing black and white, making these connotations almost dangerously distinctive where they can be very hard to distinguish. This theory is a human construct that dates back to ancient Egypt and has been used since then in almost all forms of communication and expression, such as art, fashion, literature, and religious manuscripts, helping the implantation of preconceived ideas that influence behavior and society. This is a mixed-methods research that uses both surveys to collect quantitative data related to the theory and a vignette to collect qualitative data by using a scenario where participants aged between 18-25 will style two characters of good and bad characteristics with color contrasting clothes, both yielding results about the nature of the preconceived perceptions associated with 'black and white' and 'good and evil', illustrating the important role of media and communications in human behavior and subconscious, and also uncover how far this theory goes in the age of social media enlightenment.

Keywords—Color perception, interpretivism, thematic analysis, vignettes.

I. INTRODUCTION

FROM the beginning of time and mankind, the concepts of good and evil had been very distinctive yet different from one culture to the other. Despite that, a universal method had submerged to help explain these concepts in the simplest approach, which is the use of color to help form ideas in the perceiver's head which does not involve much talking. For example, White is a symbol of goodness, purity, and light while Black is a symbol of evil, immorality, and darkness; meaning it is the polar opposite of white. According to [7]:

Good and Evil are very hard to explain or understand.

I'm sure that evil exists, but it is hard to isolate. Good and evil are intertwined and impossible to separate. They are not completely opposites and in fact, are often one and the same.

This point of view explains how good and evil are often interwind which results in the wonder about how the color theory of good and evil can paint such powerful concepts as easy to distinguish between white and black.

This study will focus on the color theory of good and evil and how it became implanted by art, fashion, and literature, and also how the millennial target market is slowly challenging that theory due to social media and in-turn, showcasing how much effect this theory has on them.

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II. RESEARCH QUESTIONS AND OBJECTIVES

A. Research Questions

- How do colors influence human behavior? And how do they affect our everyday lives?
- What is the role of art, fashion, media, and literature in influencing color theory and perception of color?

B. Research Objectives

- Understand the deeply rooted ideas about color contrasts.
- Trace the history of the theory.
- Explore how this color theory affects the modern consumer.
- Assess the effort of art, fashion, and media on social behavior.
- Investigate the efforts that can challenge or contradict this theory.

III. LITERATURE REVIEW

A. Background of the Study

The ability to see color has been preexisting from the beginning of time; it is only natural that humans start to associate what they see with how they feel. According to [11], the ancient Egyptians had associated certain connotations with colors, for example the colors white and black, where the first symbolized goodness, purity, and sacredness, and the second symbolized life, death, the afterlife, resurrection, and darkness, yet with no connotation of evil. One might argue, that the ancient Egyptians were the first people to use color psychology in their artwork as far as findings goes. This is not to say that they were the first people to use colors as symbols in their art and fashion, but in terms of archaeological findings, the color theory starts with them. The following literature review will present collected articles and books that support the aims of this research from understanding and interpreting the color theory to trace its history, as well as discovering the effect that fashion, art, literature and other forms of communications has on the theory; and how it is being challenged by millennials and social media.

B. Review of Literature

Meier et al. [12] had explained that the effect of stimulus brightness and affect in which they examined the theory by making the participants categorize words as positive or negative in which they assembled the words differently based on contrast of color and valence, resulting in the participants choosing words with lighter hues as positives and words with darker hues as negatives without these words conveying a

meaning related to these concepts. This study relates to the research in the concept of the color theory of good and bad and has helped determine that this theory has a physical impact on the subconscious and that most individuals are prone to not recognize how much it affects them.

Another study was conducted on children and how they perceive black and white, and its effect on racial presumptions. To test if the children had any differential inclinations and preferences between black and white, a test was conducted in which they had been presented with two boxes of the all the same traits except one, color, in which one was black and one was white, the children were then asked to determine if the sounds that the tape in the box played were negative or positive, the children choose that the sounds that erupted from the white box was positive and the black box was negative; when in reality the sounds were the same [17]. This research [17] had also helped determine the extent of color theory on people, and how even children are impacted by it, conveying that it is presented to people at a very young age rather than later in life, making the object of this research more valuable as it would help shed even more light on how deeply rooted these ideas are and perhaps determine a starting factor for these theories.

Reference [6] studied the color theory of black and white on clothing and how it affects human emotions particularly aggression, in which they analyzed black uniforms in sports teams and how it affects their aggression when playing and had collected data that indicates that teams with black uniforms have a higher number of penalties as opposed to those of lighter uniforms. This study [6] took an interesting approach on how the color of clothing can affect the behavior of those wearing it, proving the theory prominent in not just the perception of things but the actual inside actions that people take. Since the deliverables of this research are clothing, the article has shed a light on the process of understanding how garments can be manipulated to fit the target market and how to present it.

According to [1], after analyzing 89 researches, the findings were that the colors white, blue, and green are associated with goodness and the colors black and grey with badness, and red and black are very prominent while white, yellow and grey are very weak. This outcome confirms the ideas of color theories and introduces an interesting approach to how colors that are considered evil are stronger and more salient than colors that are considered good, thus helping the research form a stronger and firmer idea on the relationship between colors and humans.

Another research explains the relationship between black and white in a unique approach where the researchers explore how black and white affect user sentiment when using messaging services. This study found that participants perceived the messages that they received against a black background negatively and in turn perceived the messages against a white background more positively [10]. This paper [10] presents a similar outcome to the research by [6], in which the outcome was that color theory is also prominent in the actions rather than perceptions only. Additionally, [10]

helps understand how similarly, art can convey positive or negative ideas to the perceiver by the background color rather than the main subject of the art itself.

Reference [2] presents the implications of color in religious manuscripts both in the Arabic and English language and aimed to discover the meaning of these connotations and their correlation to each other despite the language and cultural differences. The result of this study found that the color terms were similar in both English and Arabic and color connotations in both the Bible and the Quran have similar meanings such as black being a symbol of evil, and white of good. As the author noted in [2], color connotations have similar meanings despite cultural differences proving that this theory is more diverse and not limited to one culture. Another interesting point is that religious manuscripts, that are considered daily readings for many individuals, included the color theory of good and evil thus strengthening the effect of this theory even more.

In an alternative approach to the traditional exploratory research methods on color connotations, [3] took to explore the emotional significance and effects of colors by asking the participant to choose their target colors, then describe their effect based on their emotions their reasons behind them. Among the many outcomes of this article, it was found that the participants had negative connotations with black and positive connotations white.

As the articles before had proved, the color theory of good and evil is still persistent and is more effective because the authors relied on the participants own emotions and interpretations without implicating any information or material that would affect their conclusions; meaning that these ideas are more likely to be preconceived and instilled in them by society and media.

An important portrayal that contributed to the theory is explained by [13] where demons were portrayed in art as deformed beings with skin tinged with red, black or white to give the illusion of evil, similarly the devil was portrayed as wicked and not frightening at first but later on he was the icon of terror. On the other hand, angels were presented as divine creatures of light with features similar to or the same as humans. This book [13] illustrates how creatures that are deemed good are often associated with light colors and human features while creatures that are deemed bad are often associated with dark colors and deformities to elucidate the concepts of good and evil. As this book explains the common symbols in art, it is clear that this adaptation of the color theory in art reinforces the theory in the perceiver's eyes by visualizing the characteristics of good and evil through color.

According to [14], black was associated with death first in ancient Egypt yet it had no connotations of evil but instead of fertility and rebirth, where almost always, the gods and other divinities were painted with black as it became a hopeful symbol of rebirth, as opposed to the color red which was instead of black, a symbol of evil and destruction. Black had continued to be a color of death since ancient Egypt but had caught along the way negative connotations of evil from ancient Greece as it was also associated with the underworld

hell where sinners would be and had continued to have negative connotations throughout history and even more especially as Christianity had emerged.

It is enlightening how black had first become a positive color in ancient Egypt where it is now very widely known as a negative color, and how it had since then become the color of death and continued to be for millenniums to come but with variable alterations to its meaning. This determines the root of the theory and helps gain a better understanding of color.

Another interesting study about the history of black is explained by [15] where it was found that black was a symbol of mourning and grief all around the Victorian era, and even Queen Victoria herself had worn only the color black for forty years to mourn the death of her husband Prince Albert. Around that time black became widely known as a depressing color for what it symbolized, that was until the design of the little black dress by Coco Chanel, had become popular in the 1920s. The designer had detested what black stood for and had wanted to change the perception of black from being a color of grief to glamour. After her design became popular, black became an essential color for every fashionable woman to wear; since then the color was seen in a different light.

Fashion is always changing and with that color connotations are affected, where fashion designers or people of influence can change a perception of color by showcasing an article of clothing in a certain way to make it appealing to people regardless of silhouette or color, and by that influencing a new manner of dress and style that people follow. This proves that the color theory is not immune to change and might contain different meanings depending on the form of media that the colors are presented in.

Black is a dominant color in both the past and the present, being widely popular in the west as the Victorian mourning outfit to it shifting to a popular choice of color for business attire for men and then changing to represent "chic-ness" in the little black dress design by French designer Coco Chanel and to now becoming the main color in fashion due to its anonymity, and it is an easy color choice for people to fit in with others; because of its widely spread popularity among people [16].

The association of black with the devil, death and evil, connotations in which a lot of people tend to run away from, is ironically a favorite color in clothing to many consumers, making fashion a huge influence on the perception and interpretation of color, next to social media and other influences.

According to [4], fashion designers are highly aware of color connotations especially black being associated with the devil, death and a symbol of evil while white being associated with purity, goodness, cleanliness, and neutrality but despite these strong connotations, fashion continues to repel and challenge color theories; and often have an effect on their meaning. An example of fashion being a big factor of color theory is the color black which was used as the appropriate color of mourning in the past to turning into the most consumed color in the fashion industry regardless of meaning.

It is interesting to see how fashion had contributed a lot to

the color theory throughout history, being one of the most dynamic factors to change its ideas. Also, those consumers are slowly disregarding these connotations due to people changing their perceptions on colors because of trends in fashion, especially as each year has a main color trend; more and more connotations are being adapted to colors. An example would be how black is now seen as "chic" and "glamorous" because of the image of the little black dress by Coco Chanel instead of being a color of evil and powerful connotations; that is only accessible to certain people.

Black is not the only color with a unique background, white also has an interesting history to which [8] adds that the color white, being now the most common color for wedding dresses was not really a typical color for these occasions. Wedding dresses used to be a display of social status and wealth throughout history, meaning it was common to see the vibrancy of colors and embellished fabrics for high ranking people but that has changed around the 1840s where Queen Victoria married Prince Albert wearing a simple white dress, to symbolize purity and cleanliness. This move was a shock to some since it white was considered a plain color for a Queen, but not long after that, white became a widely-spread trend for wedding dresses, where Godey's Lady's Book, a popular women's magazine, issued a statement in 1849 saying Custom has decided, from the earliest ages, that white is the most fitting hue, whatever may be the material. It is an emblem of the purity and innocence of girlhood, and the unsullied heart she now yields to the chosen one." Since then white became a staple color for wedding dresses for its connotations [8].

It is mind-provoking how a move as simple as choosing a color of a dress can influence a continuous trend that is still dominant for almost 170 years forward and how can a person has that much power in influencing people's choices, where it was Queen Victoria herself who popularized the color black for funeral attire and white for wedding attire; supporting the color theory of black and white whether knowingly doing it or not.

C. Conclusion of the Literature Review

The objective of this literature review is to explore preexisting data from research articles and books to help this study meet its aims. After carefully reviewing these sources it has been concluded that the color theory of good and evil is much more prominent in people than one might think, it exists in both children and adults and is conveyed in almost all forms of media and communication such as religious texts, art, or fashion, uniform and so on. As expectedly, due to the wide interpretation and usage of the color theory in all these forms, a widespread effect like this leads to the formation of preconceived ideas, which affects human judgment and choices without the person's knowledge or awareness of it oftentimes. It has also been concluded that one of the biggest factors that affect this theory is fashion where people are disregarding these connotations that colors have and changing them depending on trends made by fashion influencers or designers such as Chanel's little black dress or Queen Victoria's white wedding dress. Overall the literature review

has provided great insight into the topic of this research as was previously mentioned; making the process of collecting data much smoother and perspicacious.

IV. METHODOLOGY

A. Setting

Color interpretivism can be different from culture to culture and although the particular color theory that is being discussed in this study is universal, the effects that change the color connotations can vary but still lead to the same result or perception. An example would be, how in ancient Greece black was seen as an evil color due to its association with hell and in the middle ages, it was seen as evil due to its association with the devil and demons. As this research is set in Jeddah, Saudi Arabia, data will be collected from Jeddah-based participants to explore their interpretation of color theory and better grasp the effect that it has on them.

The process of gathering data started with collecting responses from the survey that had 51 participants from different parts of Saudi Arabia, while for the vignette it was based only in Jeddah, in Dar Al-Hekma University, where the targeted participants can be found.

B. Study Design

As this research is mainly about color theory and its effect, a subject that is considered very rich and diverse, a mixed-methods approach will be the best way to collect data that fulfill the objectives of this research. Further, [9] explained: "Mixed methods research represents research that involves collecting, analyzing, and interpreting quantitative and qualitative data in a single study or in a series of studies that investigate the same underlying phenomenon" The mixed-methods approach in this study will be by using both surveys and a vignette with participants that fit the target market criteria mentioned previously, this approach classifies the research as both qualitative and quantitative, meaning it will utilize both data and numbers, the survey being quantitative and the vignette being qualitative. This approach also helps gather diverse outcomes that will be compared and analyzed together after it's collected.

C. Selection and Sampling

This research is based in Jeddah, Saudi Arabia, where participants for the vignette were gathered in Dar Al-Hekma, a high-education university that is well-known for its good reputation in producing well-informed graduates, and is also the appropriate place to form focus groups for research, and a good place to find participants that fit the target market of this study.

Participants were chosen by their age, gender, and their English fluency, all found in the university making the makeup of the vignette participants; five females between 18-24, who are fluent enough to understand the task that is presented to them.

D. Data Collection Methods

This study will utilize the 'mixed-methods' approach by

gathering quantitative and qualitative data that are then analyzed and interpreted by qualified research experts to form strong results matching the aims of this study.

At the Initial Stage of the Study

The initial stage of the research starts with distributing the online survey to university students first and then to people outside the university and throughout Saudi Arabia. The survey consists of ten relatively general questions that determine the basis of the research and help take a glance at what people perceive and know about the theory. Consequently, a vignette session was conducted with ten participants, mainly at the Dar Al-Hekma university campus to gather more in-depth results about the current behavior and perception towards the color theory and how their emotions about it can trigger their actions.

Vignette

According to [5], "vignettes are short stories about hypothetical characters in specified circumstances, to whose situation the interviewee is invited to respond." Using a vignette in this study would be most advantageous as it offers a hypothetical scenario where participants would engage based solely on their feelings and perception towards the presented subject.

Surveys

A survey of ten general questions was conducted to fathom the ideas that are roaming around color theory and to collect quantitative data to support the research, the questions were carefully written to gather answers with having to influence them.

Secondary Sources

To understand the color theory and societal ideas concerning the theme of this study which also was passed down to the primary target market, a quantity of art and literary resources of historical significance were used to understand the root of the subject. Also, studies and books on the same subject were utilized to help put together the missing pieces.

E. Data Analysis Methods

The methods that are used to analyze the qualitative data are the narrative analysis method and the discourse analysis method, where the first is to analyze the data collected from the vignette, answers from the session will be analyzed and interpreted based on the emotions and personal decisions and answers that are retrieved from the participants. The latter method, the discourse analysis, is used to interpret the actions and the discourse of the participants along with the surrounding environment. These methods will be used to interpret the qualitative data to answer the research questions and meet the objectives.

For the quantitative data, a more structured method will be used, which is the descriptive analysis method, as it will help analyze data collected from the survey, and converting the data to a numerical distribution to create different forms of

charts; to help illustrate the numerical data clearly.

After analyzing both the quantitative and the qualitative data, the grounded theory will be used to see if the results can be used to explore the theory and explain why it's happening and depending on the results; explore the psychological phenomena that surround the theory more.

V. RESULTS

Color theory is, without doubt, one of the biggest phenomena that exist in our daily lives, making the efforts to understand it better, help us in understanding the inner effects that influence our actions and perceptions and how we can control its effect on us. This research contributes to the knowledge that surrounds the theory by sharing these results that are collected from the mixed-methods approach. After analyzing the quantitative data, it was found that of the 51 respondents to the survey, 37.3% of them are familiar with color theory yet 62.6% of them believe that colors influence their actions and decisions; as seen in Figs. 1 and 2.

Are you familiar with color theory?

51 responses

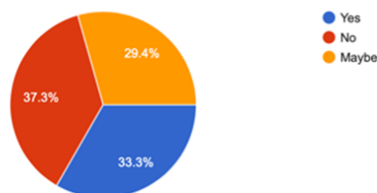


Fig. 1 Familiarity with color theory

Do you believe that colors influence your actions and decisions?

51 responses

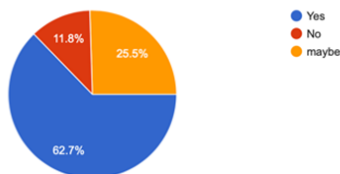


Fig. 2 Influence of colors on actions and decisions

Another result from the survey is that 34 out of 51 respondents associate the color black with evil when asked what colors they would style evil characters with; as shown in Fig. 3, Yet 20 out of 51 have black as the most prominent color in their closets, see Fig. 4.

The vignette complemented the results of the survey as it yielded results that helped take this theory into a broader light, as ten participants were provided with a scenario about two couples where one is abusing the other who is suffering from Stockholm syndrome and feels piteous and at-fault towards the abusive partner. The abusive partner was presented with explanations for his behavior, not meaning that it was justified in the scenario but only was provided with a backstory to his actions; this was done to provide two characters where one is

'good' and the other is 'bad' without it being too obvious for the participants. Based on this scenario participants were provided with an open-ended question that was how they would style these two characters in terms of color and choice of garments, the participants filled these questions individually with no sharing of answers, so it would be personal to their imaginations and emotions. After writing down their answers, they were asked follow-up questions about their answers separately.

What color would you style evil characters with?

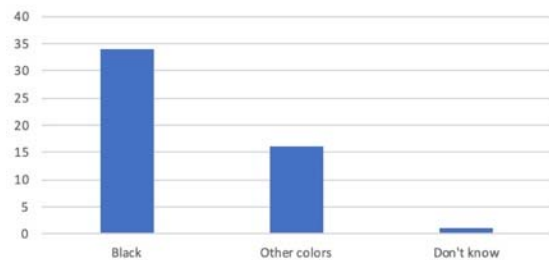


Fig. 3 Stylization of evil characters by use of color only

Most prominent color in closet

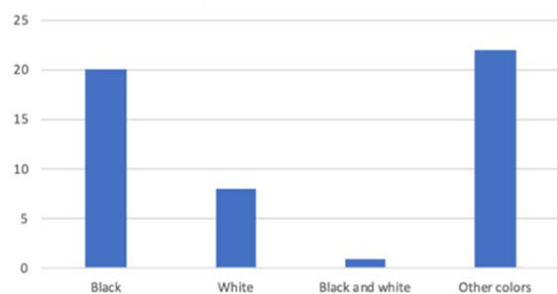


Fig. 4 Colors that are most prominent among consumers' closets

The results of this session had exceeded what was expected, where 70% of the participants had styled the character that is considered 'bad' in a white stained shirt. This was contrary to the color theory of good and evil, where it was expected to be the opposite. But upon further inquiry with these seven participants, it was found that the choice of a white stained shirt was because of how weak the character is, and the stains are a representative of how the character isn't pure or good as white is. All ten participants had dressed the good character with the color black, another contrast to the theory because black is a strong powerful color, they've seen the good character as a strong working woman, so black to them was an "obvious choice".

What was very interesting is that the results were almost unanimous despite the participants being of different groups, whether it is age, gender or field. One answer was different where the participant had chosen the color red for the bad character but upon further conversation, it was found that the character had extensive knowledge of color theory and had chosen the color red due to its association with rage and anger. This was different to the other answers because this participant

was the only one that had thought of the question with color theory on the mind, while the other had written down what they had imagined the characters was wearing; making it truer to the perception that people have towards colors because their answers were not influenced with theories or anything that might make them think beyond their imagination and feelings.

VI. CONCLUSION

This study questioned the effect of color theory on behavior and perception and how media can alter it, with that taken in mind, the results had helped illuminate how color theory has changed throughout the years. First the color black was not associated with evil by the ancient Egyptians but changed to be the epitome of evil by the middle ages. Centuries later, it became the Victorian mourning color to be a color of power and formal wear since the 20th century. This study looked to the connotations of good and evil towards colors and while they still have these connotations universally it was found now that the targeted group of millennials have shifted their perception of these colors and have seen it in the light of weakness and strength, this shift was affective due to fashion being its most dynamic factor of change to the theory, where a simple black dress such as Coco Chanel's LBD had changed the perception of black from a mourning color to the color of glamour for fashionable ladies, as was mentioned by [15]. It is also interesting to see that color white is more 'weak' than it is seen as 'good', wherein the results of the vignette, people had associated white with a 'bad' character but because they have seen it more 'weak' rather than 'bad', the color white was more appropriate to the character. It is provoking how much affect forms of media and communication have on our perception where it can change how we perceive everything that is around us, nothing is set in stone, how we see things now can change a day ahead.

APPENDIX

Appendix A. Vignette Manuscript

You're a stylist for a movie and you have been assigned to dress two characters: Mark and Kim. Please describe how you would style them in terms of colors and garments.

Characters Backstory

Mark and Kim are in a five-year marriage with two kids, they are living in Detroit, USA. Their financial status is low due to Mark being unemployed, making Kim the sole provider of the family and also in charge of taking care of the children and the apartment. Although Kim is overloaded with work both in-house and out-house, Mark is free of any duties and is often by the couch drinking or smoking; which results in him abusing her. Kim is very patient with Mark because she feels guilty for making Mark feel less than her by her having a job and him not. Mark is enraged with Kim because he doesn't want her pity and continues to beat her so he can feel more like an alpha male, or at least that's what he thinks.

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