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Typeface Connotation

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Typeface Connotation

For the degree of Master of Fine Arts

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Date

TYPEFACE CONNOTATION

A Thesis

Submitted to the Faculty

of

Purdue University

by

Matias Ferrari Carlevari

In Partial Fulfillment of the

Requirements for the Degree

of

Master of Fine Arts

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To my wife, without her there would be nothing here to read.

To my parents, for their support.

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ABSTRACT

Ferrari Carlevari, Matias. M.F.A. Purdue University, December 2015. Typeface Connotation. Major Professor: David L. Sigman.

Since the invention of movable type, letters and characters of the Western alphabet have worn many different typefaces. The same way clothing can suggest fragments of the persona of who wears them, it has been suggested that typefaces carry connotative value. The fact that typefaces can non-verbally communicate is an intriguing fact due to the relevance of its textual signification and high usage in daily routine. Harrison and Morris (1967) suggested that typefaces can connotatively reinforce the textual content of a message, provide new and independent meaning for words, offer neutral or minimal connotation, or create a conflict between the connotation and denotation of the words. Research has demonstrated that images travel first from the eye to the thalamus and the amygdala, before a second signal is sent to the neocortex (Seward, 1997). The implication of this finding is that emotional responses to visual stimuli are already triggered by the time we get to think through them, thus influencing conscious attitudes and behavior.

Given the potential influence that typefaces can exert on people's attitudes, visual communications designers must understand the impact the messages they craft may have on their audiences, and avoid possible contradictions between how the message is

presented and what was expected of the message. *Visual dissonance* (Soslo, 1996) an adaption of *cognitive dissonance*, is the mental stress produced by such contradiction, it is a factor known to hinder the possibilities of influencing attitudes and compliance gaining (Gass & Seiter, 2013).

This research quantitatively investigates the connotative value of a set of four typefaces in the context of the Competence–Credibility–Charisma–Compassion Scale—or C4 Scale (Buck & Viera, 2001) as a method to understand the impact typefaces can have in presidential campaigns.

CHAPTER 1 INTRODUCTION

1.1 Introduction

Most frequently, experienced designers share their perspectives and points of view about design-related topics through public critiques, opinion-based analysis and experiential insights translated into qualitative content. The professional opinion of experienced designers is often shared through design talks, books, magazines and online articles, influencing students, professionals and aficionados. Often, there is a lack of scholarly or peer reviewed research to support the claims designers make. This research attempts to contribute to the body of scholar research regarding graphic and visual communications design by providing evidence that can either corroborate or question personal opinion, and qualitative suggestions assumed to be *truth*. Most importantly this research attempts to provide quantitative data gathered experimentally that will allow readers to engage in developing their own conclusions.

As professionals, graphic designers should be concerned with the impact that the visual messages they craft have on audiences. The purpose of a product of visual communications design is to get the audiences' attention, deliver a message and trigger a response in the audience. Although the success of the message cannot be measured only taking into account the visual composition, the efforts of a designer should be focused on enforcing the impact of a message to his/her audience.

To fulfill this purpose, visual communications designers rely on different elements of design, such as lines, shapes, color, textures; concepts such as composition, art direction; and different media such as paper, digital, installations, etc.

Visual communication campaigns often aim to obtain a response from the audience. For example, if we consider a presidential campaign, a visual campaign deployed for such a purpose will have the core mission to deliver a message that ultimately translates into votes for a specific candidate. Visual campaigns often display a verbal message to ensure that the idea of the campaign is clearly stated, minimizing the chances for the audience to conclude differently than the emitter's intentions. When referring to the verbal messages embedded in visual campaigns, the words, phrases and/or paragraphs become part of the visual composition. Words in visual compositions have denotative meaning, and also a connotative meaning that may vary across context and audience.

However, this research does not explore the meaning of the words, but the connotative value of the form of the letters displaying the words, the typefaces. Do typefaces hold connotative value appreciable by the receivers of a message? If so, can different people perceive the same —or similar connotative values from the same typeface? Furthermore, can typefaces enforce the effectiveness of a visual message? To explore these questions, this research is contextualized in the topic of presidential campaigns in the United States of America.

The first presidential candidate in the United States of America known to widely use visual communication was John Quincy Adams in 1840¹. Since then, the need to visually introduce and communicate presidential candidates' persona and ideas has grown continually. The first visual elements used by candidates were posters. With the advent of new media and technologies in recent decades, candidates have been able to operate with a wider range of visual elements, from bumper stickers and yard signs to today's many digital media. Typefaces have been part of visual communication in presidential campaigns since the very beginning of the practice of campaigning with visual material. The following sections of the introductory chapter will address three topics in order to establish a foundation for the research *Typeface Connotation*: decision-making, visual perception and typeface connotation.

1.1.1 The process of decision-making

Presidential elections are a matter of decision-making. Citizens of voting age face different situations in which decisions must be made, these, having a direct impact in the final turnout of elections. Citizens in the United States of America not only have to decide whether to vote for one candidate over another, but also if to vote at all. Different theories have posited arguments about what motivates people to vote or not, and to vote for one candidate over another. Whether people vote or not, vote for one specific candidate, or another, they are going through a decision-making process.

¹ John Quincy Adams became the first presidential candidate to widely use posters in 1824, according to the University of Virginia's Miller Center. But, the oldest American campaign poster in the Library of Congress's digital file promoted candidate Andrew Jackson in 1828.

As one theory about what influences people in making decisions, Rational Choice Theory (Eriksson, 2011) in a nutshell, has triggered intense and broad discussion because of its applicability to a variety of topics. Rational Choice Theory suggests that decisions are the result of benefit-cost calculations. The basis for Rational Choice Theory suggests that the expectations of the person making a decision needs to meet the potential outcome of the decision he/she makes. Meaning that the subject needs to perceive the relevance in the choice he/she makes and that the decision will have an impact on the potential outcome of that choice.

One limitation of Rational Choice Theory applied to presidential elections however, is that one person alone is unlikely to be able to perceive the potential influence that his/her individual vote will have on his/her expected outcome (Blais, 2000) because of the large number of other subjects having influence on the outcome. And still, people vote in the thousands and millions in presidential elections, which, opens the door to further research and competing theories. Another limitation that makes Rational Choice Theory controversial is that, regardless of the degree of rationality involved in the process of decision-making, there is no reference to the argument of the forces influencing the benefit-cost evaluation process. Aren't these influential forces equally or even more relevant than the evaluation process itself?

Research over the past few decades has focused on the exchange between emotion and reason to explain the process of decision-making. The Elaboration Likelihood Model of Persuasion (Petty & Cacioppo, 1986), has gained wide support as an essential contribution to theories of persuasion and the influence on attitudes. It explains decision-making with a model based in two routes: one central, that engages the subject in deep

thinking and mental activity; and one peripheral that relies on mental shortcuts, like creating attitudes towards a new product in a grocery store because of the packaging design. Both routes act and interact to influence attitudes. A similar model is the Heuristic–Systematic, which incorporates relevance of experiences in the equation made by the two routes (Chaiken, Liberman, & Eagly, 1989). It has also been suggested that, when in the process of decision-making, a person is affected by both internal attitudes and external forms of influence attempting to change, empower, create or eliminate these internal attitudes, which ultimately drive behavior (Cialdini, 2009; Gass & Seiter, 2013) . With the development of human sciences and technology it is now possible to measure the physiological manifestation of emotions and the degree of influence the emotions may have on human behavior. Because of the development of technology that makes possible to understand how emotions can drive decision-making, marketing researchers joined the collaborative effort to develop further studies with the interest of transforming findings into profit.

Buck, Anderson, Chaudhuri, & Ray (2004) explored nonverbal communication and its practical application to the realm of marketing communication and persuasion. Through the design of the Communication via Analytic and Syncretic Cognition Scale (CASC scale) they were able to measure both analytic rational knowledge and a large number of varieties of syncretic-affective knowledge. As a variant for the CASC Scale, the Competence–Credibility–Charisma–Charisma Scale (C4 Scale) was designed by (Buck & Vieira, 2002) to measure, evaluate and develop a greater understanding of the socio-emotional qualities desired in a U.S. president.

Building on the findings of the recent marketing research, the *Typeface Connotation* research attempts to quantify the perceived connotative value of four different typefaces (Times New Roman, Helvetica, Gotham and Glypha) in the context of the C4 Scale and socio-emotional qualities desired in a U.S. president as a way of understanding the theoretical impact typefaces may have in presidential campaigns.

1.1.2 Visual field and visual world

Is it possible to persuade by triggering emotions through visual stimuli? It takes only a few minutes of watching television to realize that advertising and marketing experts are inclined to believe so. For emotional engagement, advertisers for emotional engagement often choose humor, sex and shock expressed through visual strategies.

To interpret the role that visual communications design can play in the decision-making process, it is important to understand how images travel from the eye to the brain, what happens within the process and how this trail translates into fruitful information for the designer in order to create more effective messages. Recent research reveals how sensory signals from the eye travel first to the thalamus, then to the amygdala, before a second signal is sent to the neocortex (see Figure 1). The amygdala attaches emotional significance to incoming data and readies the body for a response; this can occur independently of conscious decision to act (Seward, 1997). The implication of this finding is that emotional responses to visual stimuli are already triggered by the time we get to think through them, thus influencing conscious attitudes and behavior.

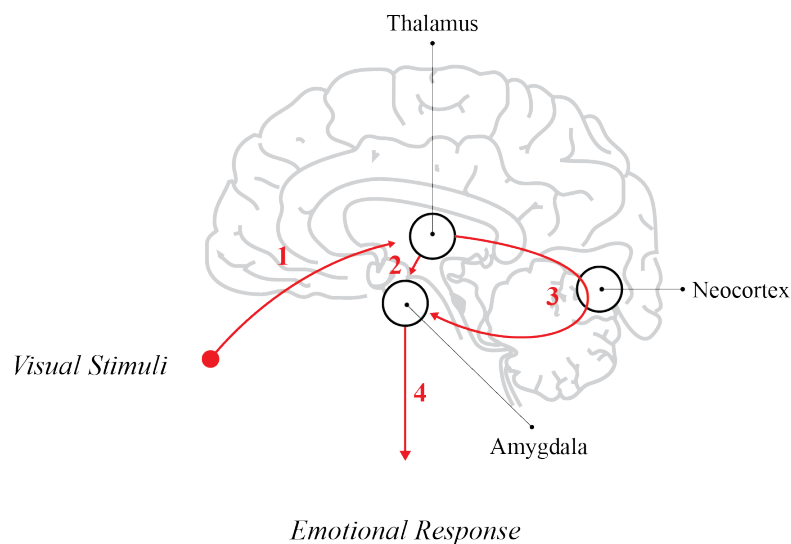


Figure 1 – Path of visual stimuli

The figure presents a diagram of the path that visual stimuli follows in the brain. (1) The signal travels to the Thalamus; (2) two signals are sent, one directly to the amygdala and (3) a second slower signal that goes through the Neocortex to the amygdala (4) the signal is processed into attitude, behavior.

In her book, *Visual Intelligence*, Seward (1997) initiates the concluding with the following sentence:

Today advances in technology have given commercial and political interest the ability to manipulate the way we see and comprehend our world before our understanding of visual messages has fully matured.

The things people see can be perceived differently by them. This happens primarily due to the vast range of different experiences people get to live through.

Alfred Korzybski referred to the idea of visual perception with his principle *the map is not the territory*, Korzybski explains that what the eye sees is not a picture of reality as it is. It is a picture of a reality to us, combined with the information gathered through the other senses and our past experiences. J. J. Gibson defined the light falling on our eyes as “the visual field” and the interpretation of it as “the visual world” (Seward, 1997).

As an example of the concept of visual perception, imagine what a physical representation of a dog means to two different subjects. The first subject grew up surrounded by loving dogs and the second subject had one or several encounters with dogs that led to painful and traumatizing experiences. Though physically both subjects are likely to see a canine mammal standing in four legs, each subject may react differently to the visual stimuli.

Though there is research and data analysis of the persuasiveness of audiovisual media, little has been done recently about posters and printed advertisement, and even less in the specific effect of typefaces in visual compositions. Often in design, activities such as *focus-groups* are the preferred method to gather the information needed to achieve a higher impact when crafting a message, however, the results of commercially driven *focus-groups* rarely translates into research publication or peer-reviewed articles.

Furthermore, quantitative research in general is an exercise that hasn't been a recurrent practice for visual communications design practitioners. The primary consequences of the lack in quantitative research and peer-reviewed research in contemporary visual communications design are, first, that personal interpretation and trends are driving the work of professional designers, which may lead to biased decisions in design direction; and second, there are significant contributions still to be explored for visual communications design to have a stronger impact on its audience.

Visual communication campaigns were deployed on a national scale in the form of posters to persuade people during World War I and II in the form of posters to increase the rate of inscriptions to the army, and to modify beliefs and attitudes towards ethnicities, geographical barriers and religion.

Although posters can not be accounted the only factor influencing the number of applications to the army, experimentally, little has been done to truly measure the impact of such visual messages.

There has been research regarding the persuasive effectiveness of branding elements such as logo design (Bottomley & Doyle, 2006; Mitchell, 1986) and food packaging, in terms of their color, material and desirability in order to measure the impact that such usage of the visual has on consumption (Genschow, Reutner, & Wänke, 2012; Labrecque & Milne, 2012). However, research focused specifically on the typefaces has received little attention in research about persuasion.

1.1.3 Typeface connotation

Given that typefaces and persuasion are fundamental elements in visual communications design there is a surprising scarcity of published research about the impact of typefaces on persuasion. Understanding the connotative perceived value of typefaces as visual elements is an important asset for the development of visual media capable to deliver consistent communication by avoiding any kind of visual dissonance (page 18) in order to increase the chances of creating, reinforcing, changing or eliminating attitudes.

Typefaces can be understood in two dimensions: as *visual elements*, thus capable of delivering connotative and cognitive-emotional information and as *textual information* media when used for displaying content, the latter being less connotative and more denotative. Although the selection of typefaces for the textual dimension is often made in terms of legibility (Arditi & Cho, 2005, 2007; Yager, Aquilante, & Plass, 1998), research also suggests that there is substantial basis to claim that typefaces have connotative

variation (Tannenbaum, Jacobson, & Norris, 1964). Harrison and Morris (1967) suggest that typefaces used to communicate can: (a) reinforce the connotative message of its content, (b) provide new and independent meaning to the words, (c) offer neutral or minimal connotations, and (d) produce a conflict between the connotative value of the typeface and the words.

Harrison and Morris' conclusions hardly come as shocking revelations when typeface settings are pushed to extreme and contrasting persona as shown in Figure 2 (left). When a financial advisers' brand (a service that often crafts messages emphasizing seriousness and security, by emotionally communicating trustworthiness, efficiency and knowledge among other values) is presented with a *playful* and *fun* typeface, the message produces tension in our cognitive structure. In contrast, a children's entertainment professional that should playfully engage its audience is represented with a formal and traditional typeface which doesn't seem to complement the message it conveys. When the same sets are switched as seen Figure 2 (right) then the connotative value of typefaces makes more sense and visual dissonance is reduced or eliminated.



Figure 2 – Typeface connotation

Extracted with author's permission from the book *Type Matters* (Williams, 2012). Typefaces used: Copperplate Gothic and Jabbawub.

The research on typefaces and their connotative values on this thesis has three sources of motivation. First, research about the connotative value of typefaces often uses graphic designers as subjects for the experimental frame (Koch, 2011). Using designers has proven a limitation for a study that requires a more varied perception of the connotative value of typefaces, especially since presidential campaigns have a greater and more diverse target audience, and the fact that graphic designers through their careers develop a different sensibility and knowledge about typefaces indicates the possibility of collecting biased data. Second, research about the affective-cognitive value of typefaces has concluded upon typefaces of contrasting forms and personas, and typefaces unlikely to be found in presidential campaigns (Brumberger, 2003). And finally, the author of this research perceived a need of further contribution to the body of quantitative and qualitative research in visual communications design beyond technique and more as inter-disciplinary collaboration between psychology, consumer science and visual communications design, which the author believes is a constructive step forward in the valorization of the discipline. As visual communicators, designers have a responsibility that goes beyond aesthetic concerns.

1.2 Definitions

Before moving forward into this research, some key are explored and defined.

1.2.1 Typefaces

Typeface is what language looks like (Lupton, 2010). While it is true that images get the reader to look, type delivers the message and meaning; the tone of voice and feeling.

Pacing and visual tone of voice are essential considerations of type effectiveness (White,

2008). In Figure 3 the idea of communicating a similar statement with different *tone* and *feeling*, is visually displayed with two examples of the “I love you” phrase communicating with different intensity and emotional connotation by changing the typefaces of each phrase.



Figure 3 – Tone and Feeling
Typefaces used: Snell Roundhand (left) and Helvetica (right)

The history of written language as well as the different forms of communication through denotative visual forms can be traced back thousands of years if we consider pictograph carved in ancient caves, or hieroglyphs imprinted by Egyptian scribes in papyrus.

However, this research about typeface connotation fast-forwards to the year 1454 (or 1455), year in which the Gutenberg bible (Figure 4) was printed. The printing of Gutenberg’s bible is an important event for three reasons: first, Gutenberg’s bible was the first printed book in Western culture using moveable type. Second, it established the possibility of mass-printing. And third, it introduced the novelty of using and reusing the same letterforms, without relying on individual calligraphic skills different for each scribe, which ultimately created the opportunity for the design of typefaces to consistently print material.

Around 1469, in Venice, Italy, Nicolas Jenson developed the first known set of Roman typefaces favoring the humanist movement of written expression by combining sets of majuscule and minuscule.



Figure 4 – Gutenberg's Bible
Typeface: Blackletter Gothic (Textualis)

Out of this emerging trend of using a classical handwritten approach in letterform design many typefaces widely used today were born, such as Garamond and Jenson. The development of technique and technology, together with the democratization of typeface design has permitted the design and development of countless typefaces and profitable businesses (i.e. Linotype, Hoefler & Co.) related to the design, licensing and trade of the letterforms. Typefaces in the digital world are known as *fonts*. Today, people around the world have access to libraries of fonts and rely on typefaces on a daily basis for writing school essays, thesis researches, presentations, sending e-mails and many other activities.

1.2.1.1 Classification

Since the early development of typeface design, a wide variety of letterforms sets have been designed, thus the necessity for classify these was unavoidable. Classifications of types have been established by different criteria such as timeline-based and anatomy-based grouping. The most common classifications of typefaces are termed in relation to details in their design, i.e. *serif* and *sans-serif* (Figure 5) which analyzes the terminals or *tips* of the letterforms, under the group of the serif, a distinction can be made about

letterforms with terminals of squared terminals known as *slab-serif*; another type of classification focuses on stroke properties and contrasts (Figure 6): Old Style (*subtle contrast between thin and thick strokes*), Transitional (*more noticeable distinction between thin and thick strokes*), Modern (*accentuated distinction between thin and thick, often displaying geometric serifs*).



Figure 5 – Serif and Sans-serif
Typefaces: Times New Roman Regular (left); Gotham Regular (right)



Figure 6 – Classification by strokes
Typefaces used: (from left to right) Garamond, Baskerville and Bodoni MT.

1.2.1.2 Anatomy

Characters within a given typeface are expected to be cohesive in their forms.

Considering the Gestalt Principle (Stewart, 2011) of perceiving a set of parts as a whole, typefaces are a constructs of letters and furthermore letters are a constructs of parts.

In which, the variations in their design determines the typeface to which the parts and letters belong. The idea of labeling the parts of the whole in letters is generated under the necessity of providing concepts for description and discussion about typefaces.

Among the most important concepts in typeface design, *x-height* and *cap-height* refer to the lowercase and the uppercase height (or capital letters) from the *baseline* and, *ascender* and *descender* zones in reference to these lines as shown in Figure 7.

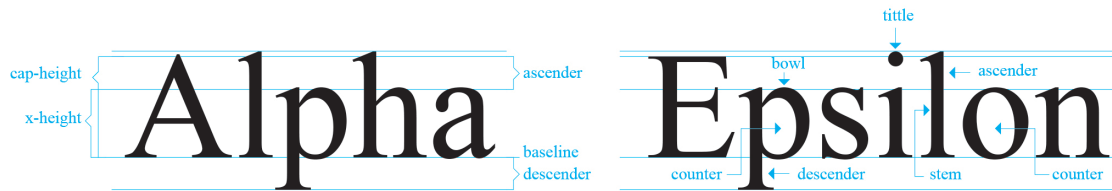


Figure 7 – Typeface anatomy
Typeface: Times New Roman

Different typefaces display similar, equal or different x-heights, as well as different proportional relationships between cap-height and x-height. This means that the same letter in different typefaces may be different in size, and the proportion between their respective uppercases and lowercases can also be different, making them appear as bigger within the constraints of their box size. Some of the names of parts of letters are visually represented in Figure 7. Lastly, within a typeface there are sometimes variations according to the visual weight of the strokes; the most common forms of variations are light, regular and bold as seen in Figure 8.



Figure 8 – Visual weight
Typeface used: Helvetica

1.2.2 Persuasion

Under the assumption that democratic presidential elections often display a minimum of two candidates, the idea is implied that people voting need to go through a decision-making process. Furthermore, the efforts of a presidential candidate are often focused on winning the electoral process. Thus presidential campaigns attempt to create, change, reinforce or eliminate attitudes of people towards a specific candidate. A clear and concise attempt of persuasion.

Persuasion is all around—in science, arts, education, etc. Probably, this pervasiveness is one of the reasons why there is so much research interested in persuasion. The study of persuasion has always been ground for debate because of the inconsistency in the different and sometimes contrasting arguments that research results suggest. It has also been the target of negative connotations; after all, it has a dark side to it. Adolf Hitler, among many others, was considered an accomplished persuader. However, campaigns to create awareness and educate people about the spread of AIDS, or teaching little kids not to play with fire also requires skillful persuasion.

What is persuasion then? And, what is not? Persuasion involves one or more individuals who are engaged in the activity of creating, modifying, or extinguishing beliefs, attitudes, intentions, motivations and/or behaviors within the constraints of a given communication (Gass & Seiter, 2013). If behavioral change is enforced without an internal attitudinal change, it is not considered a form of persuasion, but submission. However, there is a thin line between pure persuasion, where the subject has access to the information and is free to choose whether to comply or not, and borderline cases of persuasion where manipulative or deceptive techniques are applied to achieve changes in attitudes and/or

behavior, where the subject has access to limited or false information and the freedom to choose might be compromised. Generally, targets of persuasion are internal: beliefs, opinion, values, etc. once these are influenced, the expression of behavioral change occurs, therefore fulfilling the goal of persuasion.

To study persuasion, several models have been elaborated, one of them, the *Elaboration Likelihood Model of Persuasion* (Petty & Cacioppo, 1986) proposes two basic routes to achieve persuasion: the *central route* or the path of directly related information that engages the receiver in deep mental processing, and the *peripheral route*, known as the path of indirect or unrelated cues of information. Another very similar explanation is proposed by Shelley Chaiken and Alice Eagly in their *Heuristic Systematic Model of Persuasion* (Chaiken et al., 1989) that operates under the assumption that individuals rely on two different forms of information processing: one *systematic*, more thoughtful and deliberate; and one *heuristic* that relies on mental shortcuts (e.g. choosing a wine bottle because of a beautiful label or fancier bottle).

Attitudes are inherently relevant in the study of persuasion, as these help to predict, explain and modify behavior (Gass & Seiter, 2013). Subsequently, consistency in the study of persuasion is explained as the tendency of people being in a comfortable state of mind when attitudes, beliefs, values and behavior are aligned. *Cognitive dissonance*, standing in opposition to this peaceful state of mind produced by consistency, is the result of inconsistencies in the alignment of attitudes, beliefs, values and behavior. Although different individual's tolerance to degrees of consistency is variable, the principles follow the idea that with higher cognitive dissonance experienced, influencing attitudes is less likely to occur.

1.2.2.1 Visual Dissonance

Following the idea of consistency and dissonance in theories of persuasion, *visual dissonance* is defined as a state of psychological tension when one experiences inconsistency between one's expectations with what one actually sees (Soslo, 1996).

Following the same schema of cognitive dissonance, subjects encountering it will make an effort to: reduce the dissonance, remove it, or avoid it.

The stronger and more consistent a visual message is, the stronger the chances it has to produce compliance from its target. Figure 2 shown earlier in this research is an example of visual dissonance applied to typeface connotation. However, this example is a fictional scenario that purposely pushes the settings to extremes. What would have happened in a similar scenario in which both examples produce relatively equal consistency and dissonance for financial advisers' logos?

1.3 Purpose

As a summary of previous comments and a foreword for the hypothesis of this thesis, visual elements displayed in presidential campaigns should strive to: (a) generate perceived value in the act of voting; (b) create, change or reinforce people's attitudes towards specific candidates; (c) motivate a behavioral action, to vote.

The goal of Typeface Connotation is to advance our understanding in the connotative value of typefaces and the theoretical impact these may have in creating changing or extinguishing beliefs.

Although previous research in the topic of typeface connotation have proven themselves to be fruitful, the limitations were substantial to conclude upon the effect typefaces may

have in presidential campaigns, where the targets are not only graphic designers and where the visual campaigns often use typefaces relatively consistent in cognition.

With the idea of understanding the impact of the visuals embedded in political campaigns, this study analyzes the perceived value of typefaces in the context of political campaigns. Although the study pursues the idea of proving the impact of the connotative signification of typefaces in presidential elections, by no means it attempts to create the idea that voters sustain their choice of candidates solely on the typefaces or the visuals that candidates display in campaigns.

Typeface Connotation provides an experimental frame in which readers will be able to draw their conclusions applicable to design in order to avoid visual dissonance.

1.4 Hypothesis

The hypothesis is founded around the argument that typefaces carry connotative signification, and therefore, that typefaces can be used not only as elements of verbal communication but also as visual elements of communication with connotative value embedded. Furthermore, within a given context, groups of people can perceive similar connotation from a determined typeface, which may translate to a contextual emotional signification of the form of typefaces.

The hypothesis is approached in this study through the specific topic of presidential campaigns because of the vast resources and efforts spent in putting campaigns together. Presidential campaigns are also an interesting example of how individuals with no direct and personal connection to a whole population are capable of triggering strong emotions which may result in attitude and behavioral changes. The hypothesis suggests that the

forms of the letters designed in political campaigns can influence peoples' perception of the candidate's persona and thus, creating, changing or eliminating audience's attitude towards presidential candidates.

CHAPTER 2 EXPERIMENTAL FRAME

Following the purpose and the hypothesis of Typeface Connotation presented in the previous chapter, in this section, the Competence-Credibility-Charisma-Compassion Scale (C4 Scale), each of its sub-dimensions, and the typefaces used in this research are explored, and later linked to the questions designed for the survey to generate data. Finally, the methodology and results are introduced before concluding with a discussion of of the findings.

2.1 Competence–Credibility–Charisma–Compassion

The Competence–Credibility–Charisma–Compassion Scale, or C4 Scale (Buck & Viera, 2001) was designed to develop a greater understanding of the socio-emotional qualities desired in a U.S. President. The theoretical ground of the C4 scale lies within the Developmental-Interactionist Theory of Communication, which suggests that all communication proceeds in two simultaneous *streams*, one rational and linguistically structured and one that reflects emotion (Buck, 1985). For the development of the C4 Scale, it was hypothesized—and later confirmed within the experiment—that four major categories of socio-emotional elements related to the character are directly expressed non-verbally, naturally and often unconsciously, through a biologically-based *body language*. The four elements are: competence, credibility, compassion and charisma.

The C4 Scale was developed as a variant of the CASC Scale (Communication via Analytic and Syncretic Cognition Scale) developed in the context of advertising (Buck et al., 2004). As such, the C4 Scale consisted of a range of criteria listed along with seven points differential scales to evaluate presidential candidates in the context of the socio-emotional qualities desired in a U.S. President. The seven points differential scale started from “not at all” on the left, to “very much” on the right. The criteria listed were the sub-dimensions of each of the four dimensions composing the C4 Scale. *Competence* contained the following: competent, intelligent and experience. The sub-dimensions of *credibility* were credible, trustworthy, honest and integrity (high). *Compassion* involved compassionate, kind, sympathetic, generous and empathic. Last but not least, *charisma* grouped charisma, and three itemized sub-dimensions, the first *power* consisted of powerful, persuasive and potent; the second, *energy* included energetic, vitality and vigorous; the third, *sexiness*, assessed sexy, charming and expressive.

Participants in the original C4 Scale research were asked to fill in a form, evaluating candidates according to the criteria described above for the then ongoing 2000 presidential campaign in three stages, early in the campaign (before the first presidential debate), once again after the first presidential debate and once in December after the election had taken place.

2.1.1 The dimensions

Competence, described as skill, or qualification, and expertise among other concepts have been explained as primary factors of credibility (Gass & Seiter, 2013). This first dimension of the C4 Scale, is perceived as a key attribute of leadership both in and out of

the political sphere (Itzhaky & York, 2003). Research has suggested a close relationship between leadership and competence, described as the relevance of the perception of a leader's ability to make decisions (Burke, Sims, Lazzara, & Salas, 2007). Furthermore, research suggests that the more fair the decision-making process is perceived, the more trustworthy the public perceives the leader to be. This leads to *credibility*—the second dimension (Thomas Boone & Buck, 2003). Credibility, has been introduced as a mandatory factor in persuasion. It is a judgment made by the receiver of a message, concerning the level of believability of the communicator (O'Keefe, 2002). Credibility is a perceived value, embedded in the mind of the receiver of a message. Thus, it can be shaped independent of a source's actual honesty and it can vary over time and across different receivers (Gass & Seiter, 2013). Credibility has been divided into two groups of characteristics, the first contains characteristics highly valued by receivers: expertise, trustworthiness and goodwill and the second hold the characteristics of extroversion, composure and sociability. Trustworthiness has been also described as a primary element of effective leadership (Burke et al., 2007). Visual cues have been studied as elements capable of triggering credibility and attitudes, in the form of uniforms (for example, the controversial Stanford prison experiment in 1971), gadgets and diplomas, among others things.

The third dimension of the scale is *compassion*, which refers to people's perception of a leader putting the people's interest before his or her own interests and the capacity of the leader to mingle with the people. Gass and Seiter (2013) described this quality of character as goodwill and also suggested it as an important element of persuasion.

The word *charisma*—label of the fourth dimension, has been used to describe someone who possesses a certain indefinable charm or allure (Gass & Seiter, 2013). It has been confined as a matter of sex and power (Kowal, 2008). Charisma, has been considered as a complementary factor of credibility, and been explained as extroversion in persuasion theories, and related to the degree of energy, animatedness or enthusiasm perceived in the source. Charisma has also been explained as composure, or the ability to stay calm. It has been explained as a complementary factor of credibility due to the unlikeliness of effectiveness in a persuasive message from a source that lacks charm and allure.

2.2 Typeface choice

Times New Roman, Helvetica, Gotham and Glypha—why was this specific set of typefaces chosen among the thousands out there? A visual representation such as the one shown in Figure 2 lacks of relevance for the development of this experiment. The fact is that such a playful typeface would hardly be likely to be chosen for a presidential campaign. The typefaces chosen to promote candidates are considered more serious and traditional, and therefore the given range of typefaces used often has less contrast in form compared to the example of Figure 2.

Out of the many different typefaces available, the following were chosen for the experimental frame with these justifications:

- a) **Times New Roman** is a typeface with an important thematic connotation. It is classified as a serif typeface. Times New Roman was commissioned by The Times (British News Paper) in 1931 and designed by Victor Lardent. It has been widely used by other newspapers, magazines, academic research papers and other documents with large textual content. Times New Roman was designed with the idea of improving both legibility and identity of The Times.
- b) **Helvetica** is a typeface widely used for branding and advertising; it has been praised for its perceived neutrality. It belongs in the sans-serif group. Helvetica was designed in 1957 in a collaborative effort by Max Miedinger and Edward Hoffman in Switzerland. The name of the typeface pays homage to the country in which it was designed. Helvetica is so pervasive and beloved, that a documentary film has been made about it.

- c) **Gotham** is a younger sans-serif typeface. It was used in the campaign of Barack Obama in 2008, a campaign recognized for its success throughout the world and probably a game changer in terms of campaign development and visual tactics in politics. As part of this research, its use is intended to establish the current perception of this typeface within the United States population. Gotham was commissioned by GQ Magazine and designed by Tobias Frere-Jones in the year 2000, who got his inspiration from urban architectural signage.
- d) Adrian Frutiger designed **Glypha** in 1977. It has no particular historical relevance in political campaigns or pre-conceived connotative relevance to this research. However, it is a typeface from the slab-serif family, which is becoming a trend among visual designers, specifically in the web/digital environment. Thus, this research intends to establish a possible usage of this family of slab-serif typefaces for politics and assess its possible perceived value. It can also be said that slab-serifs typefaces were successfully introduced in political campaigns in 2012 with the President Barack Obama re-election campaign (Figure 9).



Figure 9 – Visual elements for Barack Obama's presidential campaign of 2012
Typefaces: Gotham Slab (especially designed for this campaign) and Gotham regular.

Times New Roman was recently used by Ron Paul and Newt Gringrich for the U.S. 2012 presidential elections. Gotham was introduced to the political world with great success in Obama's 2008 presidential campaign main messages "CHANGE" and "HOPE". Later, a slab-serif adaption of the same typeface was designed for the specific use of the 2012 presidential campaign for the same candidate. Helvetica has been left out of the political campaign scenario lately in the United States of America.

2.3 Methodology

2.3.1 Participants

The total number of participants was 460. Out of this total, 59 were filtered out of the results because of non-completion of the survey and for providing answers that did not reflect honest participation. Finally, the data of 401 people of voting age who answered an online survey issued through Amazon Mechanical Turk and built with Qualtrics Software Research Services, were considered for the analysis of the data. Each participant was given a statement of intention. Amazon Mechanical Turk protects participants' personal information through their system and the researchers never had access to it. Participants were rewarded with a small payment for their participation. The subjects were all citizens of the United States of America of voting age. 43.39% were female and 56.61% male. 74.3% declared being White/Caucasian, 10.2% African American, 4.5% Hispanic/Latino and 9.2% Asian. 0.7% declared being Pacific Islander and 1% selected *other*.

18.45% declared being affiliated with the Republican Party, 51.12% with the Democratic Party, 28.18% declared themselves independents and 2.24% declared affiliation with a

different party. 83.29% voted during the last presidential election and 16.71% stayed out of the process. Finally, 58.85% out of the total declared always voting in presidential elections.

2.3.2 Instrumentation

The data was mined through a survey designed specifically for the research of typeface connotation within a presidential campaign context. A total of 43 questions divided in three blocks were issued to gather data about: people's attitudes and behavior towards presidential candidates and campaigns; people's perceived socio-emotional values of typefaces in the context of the C4 Scale and; demographics. Questions were structured in a variety of ways: multiple-choice (single election), text inputs, multiple selection and rating.

The body of this research centers on the analysis of the data collected in the second block of questions (people's perceived socio-emotional values of typefaces in the context of the C4 Scale) and how it related to the data gathered through the remaining two blocks.

To collect data about people's perceived socio-emotional values of typefaces in the context of the C4 Scale, 17 questions with 9 alternatives each were designed for the participants to answer. The questions in the second block had the following structure: "The name of a fictional candidate has been written in eight different ways, which of the following best represents *X*." *X* was a different value in each of the questions. The nine response alternatives were the same for the 17 questions, and each of the alternatives was the same fictional presidential candidate's name: John Lambert. However, each alternative had the name rendered in different typefaces and visual weights. The

alternatives were shown always in a random order defined by a computer software to minimize the chances of a purposely biased repeated answer.

The different values of variable *X* were borrowed from the C4 Scale. Each of the four dimensions of this scale is composed by a subset of values: competence (competence, experience and intelligence); credibility (credibility, integrity, honesty and trustworthiness); compassion (compassion, kindness and sympathy); charisma (power, potency, persuasiveness, charisma, energy, vigor, vitality). 17 subsets in total made possible the 17 variables for the same question. However, two subsets of charisma were removed (*vitality* and *potency*) and two new ones were introduced: *conviction* and *leadership*².

The typefaces used for the alternatives were: Times New Roman, Helvetica, Gotham and Glypha, all of these in regular and bold. Thus, there were eight typeface alternatives (Table 1), plus one additional alternative “does not apply”, for people who could not relate the typefaces displayed with the variable of the question.

One of the weaknesses of surveys issued through online systems is the lack of direct interaction with participants. Often, data can be misleading depending on participant's willingness and honesty within their answers. However, Amazon Mechanical Turk grants surveyors the possibility of denying payments and evaluating participants detected as dishonest. This survey was issued to participants evaluated by Amazon Mechanical Turk's system with an approval rate ranging from 96% to a 100% to provide the most reliable data.

² Vitality and potency were though to possibly be considered redundant within the context when presented together with strength and power. Leadership and persuasiveness, are concepts alien to the C4 Scale, but were relevant for the purpose of this research.

Table 1 – Typefaces used in the study

Regular	Bold	
John Lambert	John Lambert	Times New Roman
John Lambert	John Lambert	Helvetica
John Lambert	John Lambert	Gotham
John Lambert	John Lambert	Glypha

2.4 Results

The hypothesis proposed earlier in the research suggested that typefaces carry connotative value. It was also suggested that groups of people can perceive similar connotative values from specific typefaces.

In Appendix B: Frequencies (Data Sets), the graphs display means and standard deviation for the data collected with the responses to the questions in the second block of the survey.

Figure 10 shows a set of four radar charts with the visualization of the frequencies regarding how many people related the set of four typefaces to each of the specific values coined from the C4 Scale. Figure 11 shows a radar chart with the visualization of the frequency at which people related the thickness of the strokes composing the typefaces (regular vs. bold) to the specific values extracted from the C4 Scale. And lastly, Figure 12 shows the visualization of the frequencies with which people related the typefaces classified into serif and sans-serif to the values extracted from the C4 Scale.

In the second part of the hypothesis, it was suggested that groups of people can perceive similar connotative values from specific typefaces.

For each of the questions of the second block of the survey (*see* Appendix B:

Frequencies (Data Sets)) a maximum of the 9% of the surveyed selected the alternative “does not apply”. This means that for each question at least 91% of the surveyed were able to relate a typeface to a value. Figure 13 shows that for some of the values borrowed from the C4 Scale the frequencies demonstrate clear majorities, while for other values there is less agreement as to which one of the typefaces better represents the value.

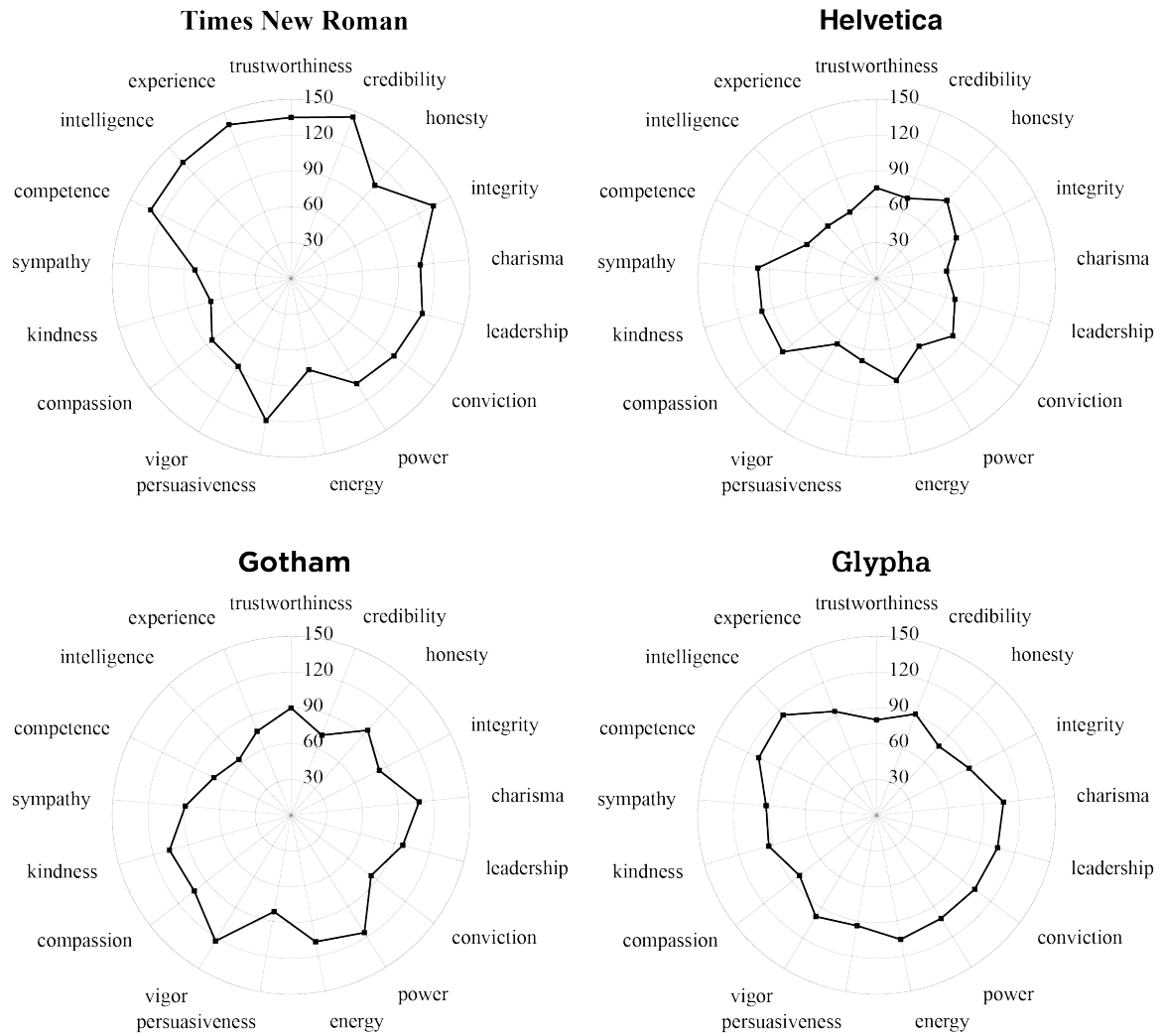


Figure 10 – Frequencies of perceived values by typeface

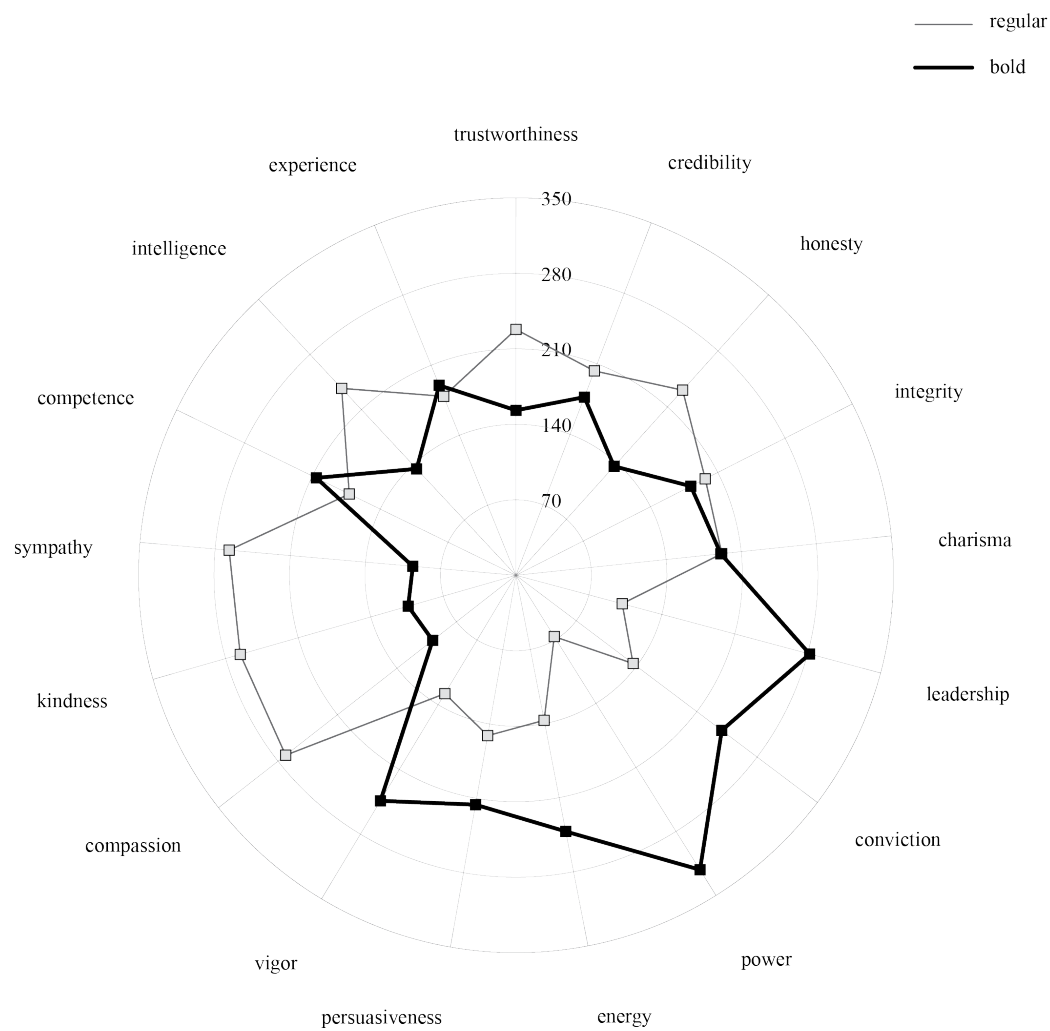


Figure 11 – Perceived values by visual weight

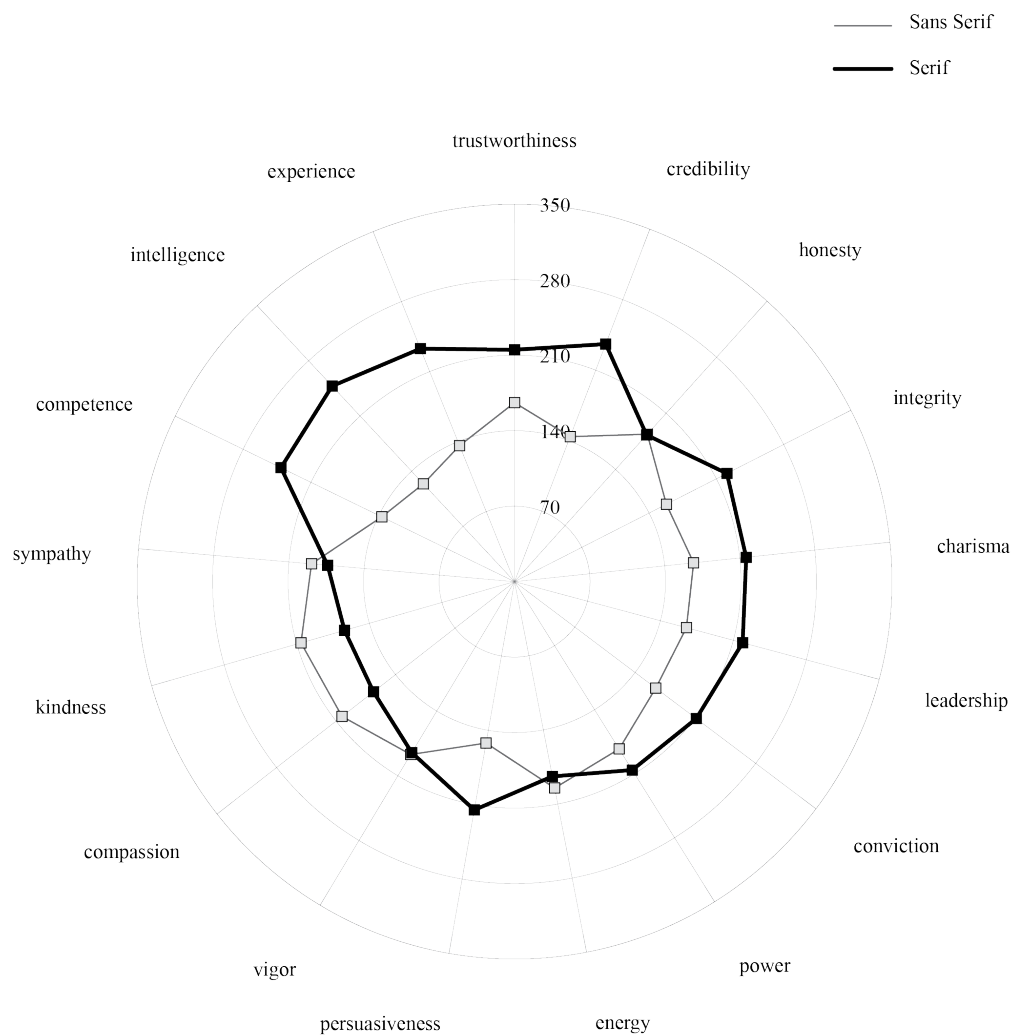


Figure 12 – Perceived values by serif (Times New Roman + Glypha) and sans-serif (Helvetica + Gotham)

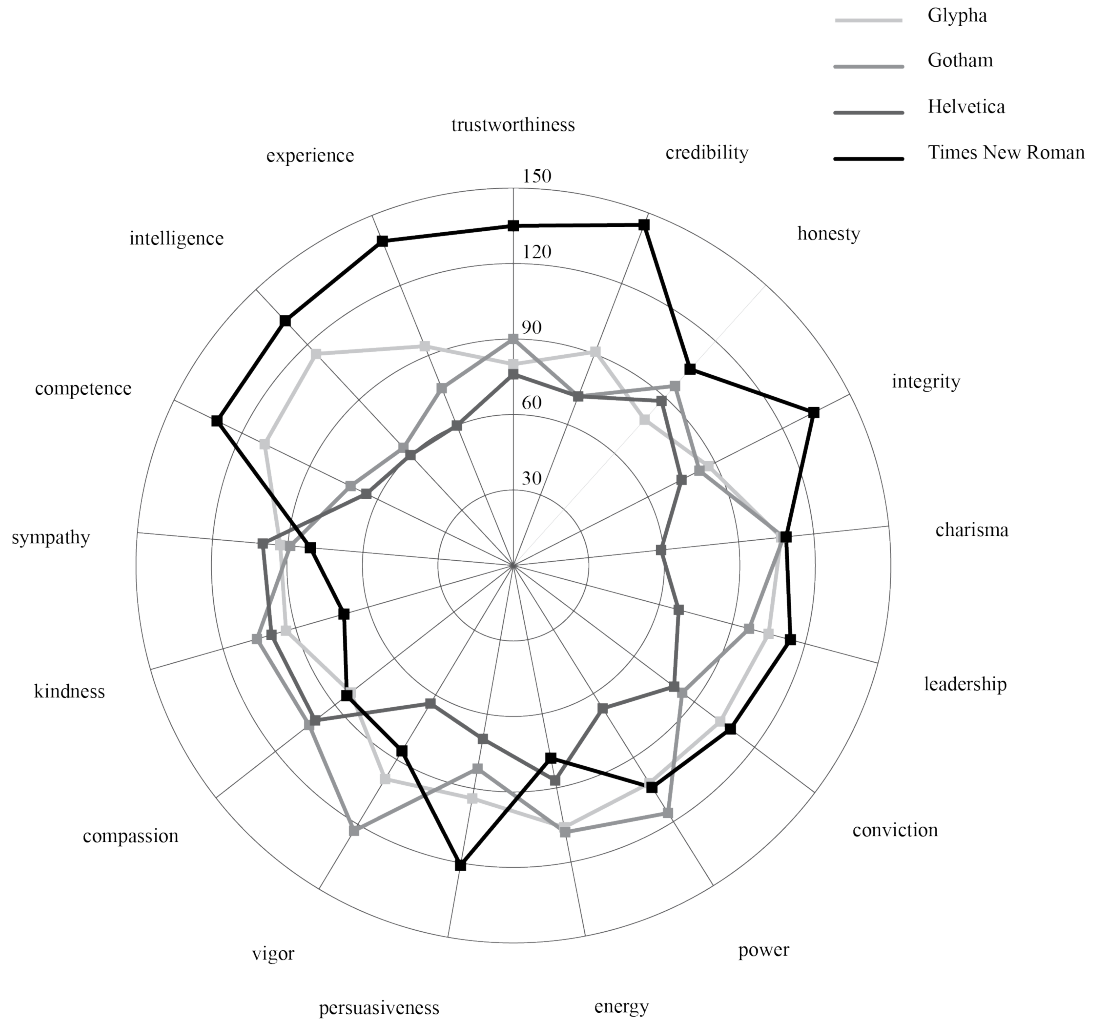


Figure 13 – Overlapped radar chart

This figure overlaps the frequencies of the four typefaces used in this experiment.

An interesting result observed through statistical analysis was that *credibility* and *competency* (dimensions of the C4 Scale) were interpreted similarly by the participant of the research as for the task of selecting a typeface that represented sub-dimensions of credibility and competency. Thus, the C4 Scale becomes a C3 Scale in terms of a typographical perspective by merging credibility and competency. Interestingly, this

effect is directly related to the *Factor Analysis of Credibility* (Gass & Seiter, 2013), which suggest that an individual is unlikely to be perceived credible in an aspect in which is also perceived incompetent.

As part of the experiment, other types of data were cross-referenced and analyzed to find relevant information to the degree in which the demographic data collected and political attitudes coined from people's responses had an influence on how they perceived values from the set of four typefaces. The only statistically significant result of the analysis was that male subjects and female subjects demonstrated perceiving integrity and leadership from different typefaces.

2.5 Discussion

2.5.1 Is it in the form?

One of the relevant results displayed by the data demonstrates how Times New Romans has such strong connotations compared to other typefaces, especially in reference to *credibility* and *competency* and their sub-dimensions. It may not come as a surprise that Times New Roman, a classic and widely used serif typeface results in being perceived as intelligent, competent or credible, if we consider that Times New Roman was commissioned to be used in a very popular and formal newspaper in England in the 1930s. Additionally, since then it has been used not only in a growing variety of newspapers, but also in reports, research papers, theses, etc. for which a similar degree of seriousness, formality and reliability is desired and found. Furthermore, these texts are often written by authors using erudite language and credible sources of information. Thus, it is logical that in time audiences will relate the specific form of the letters

belonging to Times New Roman with credibility and competency because these have been often the context in which they have experienced it. Even books are often printed using Times New Roman or other similar typefaces displaying serif. Times New Roman was designed to enhance reading experience in terms of readability and legibility, and has proven successful in these qualities. All of the above are —or may be, factors contributing to how Times New Roman has been used and therefore how it has been experienced by readers. With this information alone, it should be fairly easy to suggest that the forms of the letters shape how people connotatively perceive the typefaces. Earlier in this research, the concepts coined by J.J. Gibson: *visual field* and *visual world*, were introduced to explain the difference between what one sees and what one perceives. With this in mind, what if instead of Times New Roman, *The Times (newspaper)* would have commissioned and used a sans-serif typeface? Would the associations and connotations be different? Or would the results be more of a blur? Would Helvetica or Gotham (both sans-serif) be perceived as more intellectual, credible and competent? If so, then everything would be relative to experience and not the physical form. If this is true then, what can we expect in the future? Digital content has been constantly stealing market share from the realm of print. Newer studies that included digital content have suggested that sans-serif typefaces are better suited for the task of reading in digital media. What happens when the Web 2.0 and the digital realm, become the first choice for the consumption of information on a regular daily basis?

In 2015 Google.com announced a major identity change after 16 years of existence. The prior logo was based on a serif typeface (which seems a fitting choice for a company created to be a reliable source to find information). The new logo uses a very flat and

geometric sans-serif. Google today is by far more than a search engine, and its logo has now shifted into a more neutral visual identity that can be attached to any of its products. But the point in discussion which becomes relevant for this research is to ask ourselves, how will people in the future will be affected by having the largest and most common source of information being represented in all sans? Will Times New Roman no longer have such a strong connotation of credibility? How long will serif typefaces last as primary fonts for The Times websites?

*

Helvetica is an intriguing case study, a font designed in 1957 to be the frontline soldier of the Swiss style, a typeface that has been called *transparent*, *neutral* and *in-expressive* by renowned designers in the documentary that pays homage to this typeface. Subjects in the experimental study discussed here perceived Helvetica as a kind, sympathetic and compassionate typeface. Out of the four typefaces used for this experiment, Helvetica is by far the one people experience the most in visual advertising. Many of the full page advertisements in magazines, and many of the logos displayed in stores and on cars are designed either in Helvetica or in slightly modified versions of it. Again, it seems logical that brands attempting to cultivate friendly relationships with consumers through with visual messages are in parallel cultivating how people perceive the typeface itself. Nevertheless, just how low the frequency was with which people perceived Helvetica to connote charisma was a surprising result.

2.5.2 Theoretical impact and future perspectives

Readers of this research have found here a quantitative approach to contribute to the development of visual communications design. Hopefully, this effort will spark the desire in other prospective designers to invest effort and time using quantitative research methods to generate evidence to either question or support opinion-based assumptions. Presidential campaigns and other forms of visual persuasion not only include words in different typefaces. Colors, pictures and symbols are relevant cues of information present in visual messages. Another important factor is how perception changes through time. Take this conclusion as an invitation for you to contribute your one another grain of sand. For decades, following the example of The Bauhaus, design schools have isolated themselves from other *non-artistic* disciplines impoverishing the interaction of design students with other streams of influences. Recently, however, the concepts of design-thinking and visual-thinking have contributed to the re-establishment of the interdisciplinary development of visual communications design, leading to a renewed moral standard approachable by students and practitioners. This research has explored the use of typefaces in political campaigns as one way of understanding the connotative value of the letterforms. The design elements, their possible combinations and the different contexts in which visual communications can be used by designers is endless.

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APPENDICES

Appendix A: Survey

Are you a registered voter in the United States of America?

- ☐ Yes (1)
- ☐ No (2)

If No Is Selected, Then Skip To Do you belong to any political or non...

Rate how often do you vote in presidential elections? (Never=1; Always=7)

- ☐ Never (1)
- ☐ Rarely (2)
- ☐ Sometimes (3)
- ☐ Most of the Time (4)
- ☐ Always (5)

Did you vote in the last presidential election?

- ☐ Yes (1)
- ☐ No (2)

Do you belong to a political party?

- ☐ Republican (1)
- ☐ Democrat (2)
- ☐ No, Independent (3)
- ☐ Other (4) _____

Rate the level of influence that your party of affiliation has, when defining your vote.

- ☐ Very Unlikely (1)
- ☐ Unlikely (2)
- ☐ Somewhat Unlikely (3)
- ☐ Undecided (4)
- ☐ Somewhat Likely (5)
- ☐ Likely (6)
- ☐ Very Likely (7)

Have you ever voted for a candidate different than the one you preferred at the beginning of the campaign?

- ☐ Yes (1)
- ☐ No (2)

When presidential elections are occurring. How often do you seek information about candidates?

- ☐ Daily (1)
- ☐ 2-3 Times a Week (2)
- ☐ Once a Week (3)
- ☐ 2-3 Times a Month (4)
- ☐ Once a Month (5)
- ☐ Less than Once a Month (6)
- ☐ Never (7)

Where do you most often seek information to evaluate presidential candidates? (Mark all that applies)

- ☐ Newspapers (1)
- ☐ On-line Media (2)
- ☐ Candidate's Website (3)
- ☐ Social network (4)

- ☐ Discussion with family and friends (5)
- ☐ T.V. ads (6)
- ☐ T.V. shows (7)
- ☐ Radio or T.V. debates (8)
- ☐ Posters / Billboards / Yard signs (9)
- ☐ I do not actively seek information (10)

Which television shows or stations do you watch to gain helpful information about presidential candidates?

(Mark all that applies)

- ☐ ABC (1)
- ☐ Bloomberg (2)
- ☐ C-Span (3)
- ☐ CBS (4)
- ☐ CNN (5)
- ☐ Comedy central - Jon Stewart (6)
- ☐ Fox (7)
- ☐ MSNBC (8)
- ☐ NBC (9)
- ☐ NPR (10)
- ☐ Local News (11)
- ☐ Other (12) _____
- ☐ I do not actively seek information on T.V. (13)

How do you get involved in political campaigns? (Mark all that applies)

- ☐ I make financial donations for political campaigns (1)
- ☐ I display yard signs, bumper stickers or wear a button (2)
- ☐ I demonstrate my support publicly through participation in parades, rallies, etc. (3)

- ☐ I spread campaign messages through social network (4)
- ☐ I try to convince people around me (5)
- ☐ Other (6) _____
- ☐ I do not get involved in political campaigns (7)

Do you belong to any political or non-political organization?

- ☐ Yes (1)
- ☐ No (2)

Answer If What other characteristics should a presidential candidate demonstrate in order to receive your consideration? (List 3) Relevance 1 Is Selected

Which one(s)? (Separate by ", " (comma))

Rate your position in the Liberal/Conservative spectrum (0= Liberal; 4= neutral; 7=conservative)

_____ Spectrum (1)

What motivates you to go and vote? (Mark all that applies)

- ☐ I vote because is my duty as a citizen (1)
- ☐ I vote because I want to play a role in democracy (2)
- ☐ I vote because I am fully convinced about one candidate (3)
- ☐ I vote because I totally disagree with one candidate (4)
- ☐ I vote only when I feel the campaign is tight and my vote may count (5)
- ☐ I vote because my family and friends expect me to do so (6)
- ☐ I do not vote (7)

What one word would you use to describe the most valuable characteristic a presidential candidate must demonstrate in order for you to consider voting for that candidate? (Input 1)

What other characteristics should a presidential candidate demonstrate in order to receive your consideration? (Input 3)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Trustworthiness

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Charisma

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Leadership

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Conviction

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Credibility

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Compassion

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Power

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Intelligence

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Experience

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Honesty

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Competency

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Sympathy

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Energy

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Persuasiveness

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Vigor

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Integrity

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

The name of a fictional candidate is written in eight different ways. Which one of them best represents:

Kindness

- ☐ John Lambert (1)
- ☐ John Lambert (2)
- ☐ John Lambert (3)
- ☐ John Lambert (4)
- ☐ **John Lambert** (5)
- ☐ **John Lambert** (6)
- ☐ **John Lambert** (7)
- ☐ **John Lambert** (8)
- ☐ Does not apply (9)

How old are you?

- ☐ Under 18 (1)
- ☐ 18-25 (2)
- ☐ 26-34 (3)
- ☐ 35-54 (4)
- ☐ 55-64 (5)
- ☐ 65 or over (6)

What is your gender?

- ☐ Male (1)
- ☐ Female (2)

What is your sexual orientation?

- ☐ Heterosexual (1)
- ☐ Homosexual (2)
- ☐ Bisexual (3)
- ☐ I prefer not to answer (4)

What is your current marital status?

- ☐ Divorced (1)
- ☐ Living with another (2)
- ☐ Married (3)
- ☐ Separated (4)
- ☐ Single (5)
- ☐ Widowed (6)

What is your race?

- ☐ White/Caucasian (1)
- ☐ African American (2)
- ☐ Hispanic (3)
- ☐ Asian (4)
- ☐ Native American (5)
- ☐ Pacific Islander (6)
- ☐ Other (7)

What is the highest level of education you have completed?

- ☐ Less than High School (1)
- ☐ High School / GED (2)
- ☐ Some College (3)

- ☐ 2-year College Degree (4)
- ☐ 4-year College Degree (5)
- ☐ Masters Degree (6)
- ☐ Doctoral Degree (7)
- ☐ Professional Degree (JD, MD) (8)

What is your annual income range?

- ☐ Below \$20,000 (1)
- ☐ \$20,000 - \$29,999 (2)
- ☐ \$30,000 - \$39,999 (3)
- ☐ \$40,000 - \$49,999 (4)
- ☐ \$50,000 - \$59,999 (5)
- ☐ \$60,000 - \$69,999 (6)
- ☐ \$70,000 - \$79,999 (9)
- ☐ \$80,000 - \$89,999 (7)
- ☐ \$90,000 or more (8)

What is your current employment status?

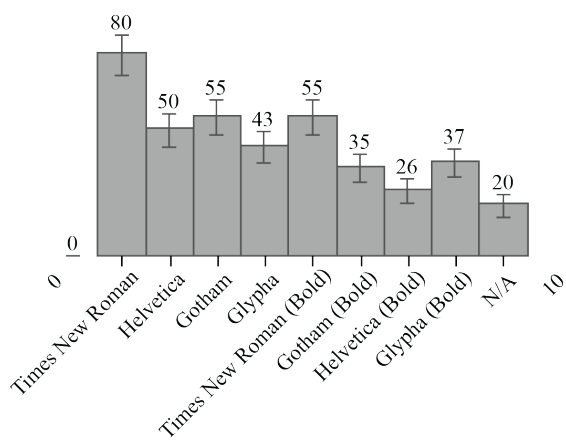
- ☐ Employed for wages (1)
- ☐ Self-employed (2)
- ☐ Out of work and looking for work (3)
- ☐ Out of work but not currently looking for work (4)
- ☐ A homemaker (5)
- ☐ A student (6)
- ☐ Retired (7)
- ☐ Unable to work (8)

What is your current military status?

- ☐ Active duty (1)
- ☐ Reserves (2)
- ☐ National guard (3)
- ☐ Veteran or Retiree (4)
- ☐ Veteran or Retiree with a service connected disability (5)
- ☐ Civilian: No military service record (6)

Appendix B: Frequencies (Data Sets)

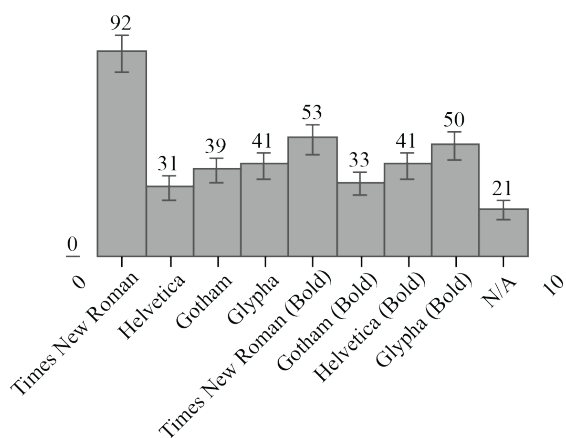
Trustworthiness



Summary Statistics

Mean	4.140
Std Dev	2.494
Std Err Mean	0.125
N	401.000

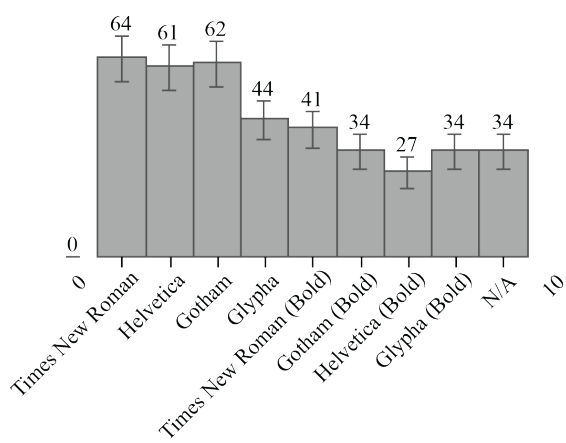
Credibility



Summary Statistics

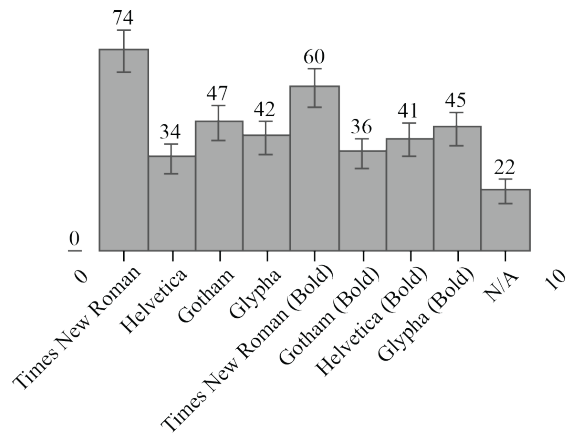
Mean	4.424
Std Dev	2.645
Std Err Mean	0.132
N	401.000

Honesty

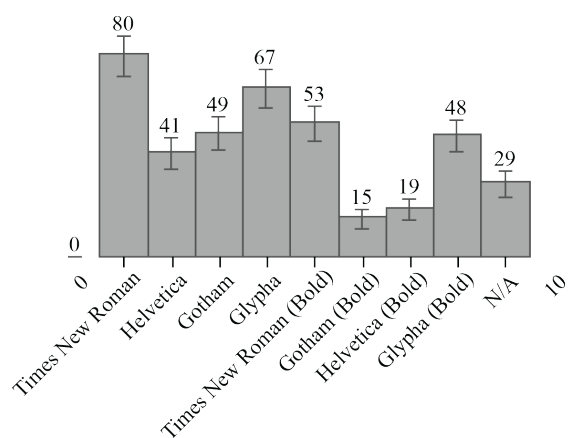


Summary Statistics

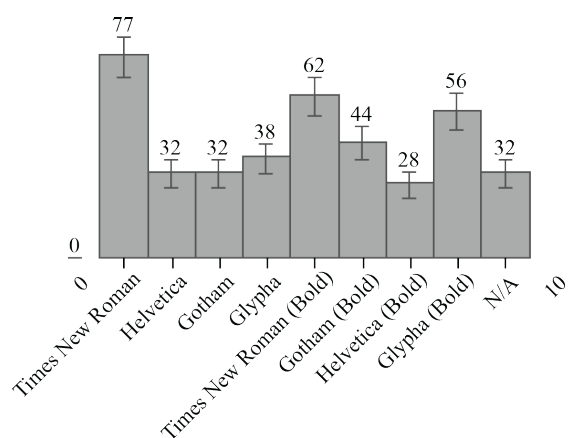
Mean	4.299
Std Dev	2.579
Std Err Mean	0.129
N	401.000

Integrity**Summary Statistics**

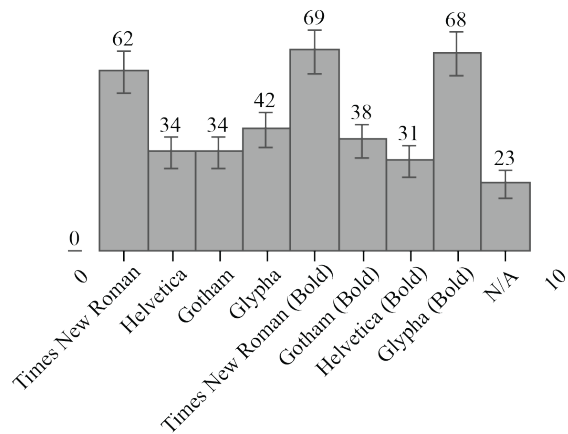
Mean	4.519
Std Dev	2.542
Std Err Mean	0.127
N	401.000

Intelligence**Summary Statistics**

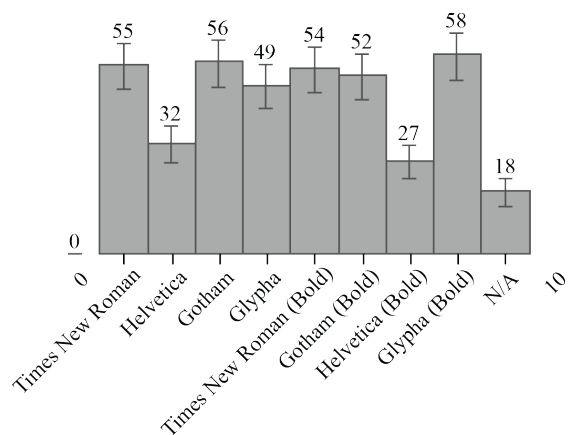
Mean	4.264
Std Dev	2.589
Std Err Mean	0.129
N	401.000

Experience**Summary Statistics**

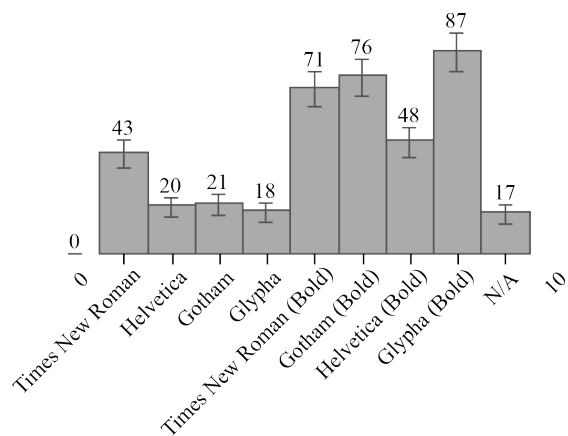
Mean	4.726
Std Dev	2.659
Std Err Mean	0.133
N	401.000

Competence**Summary Statistics**

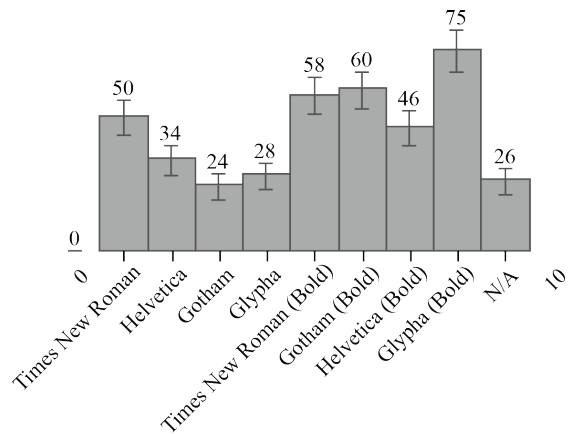
Mean	4.840
Std Dev	2.553
Std Err Mean	0.128
N	401.000

Charisma**Summary Statistics**

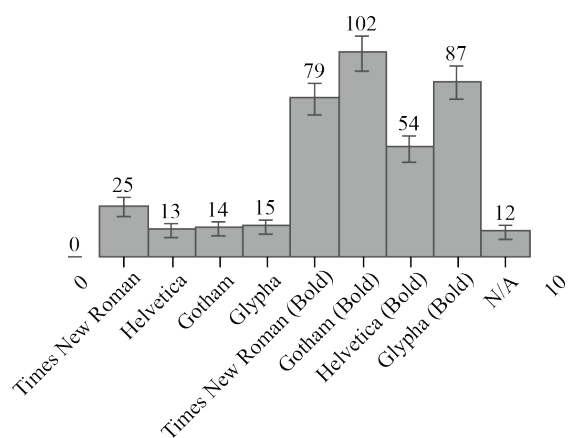
Mean	4.688
Std Dev	2.435
Std Err Mean	0.122
N	401.000

Leadership**Summary Statistics**

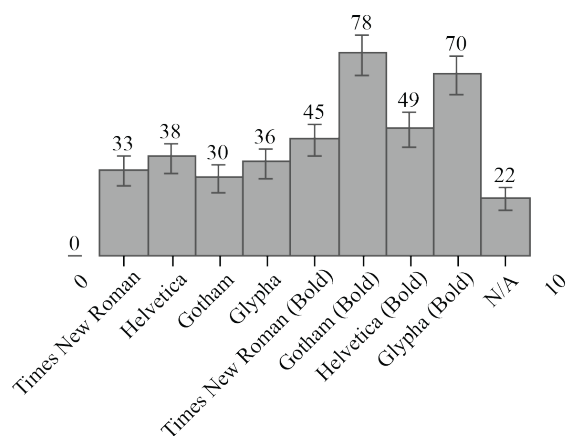
Mean	5.521
Std Dev	2.337
Std Err Mean	0.117
N	401.000

Conviction**Summary Statistics**

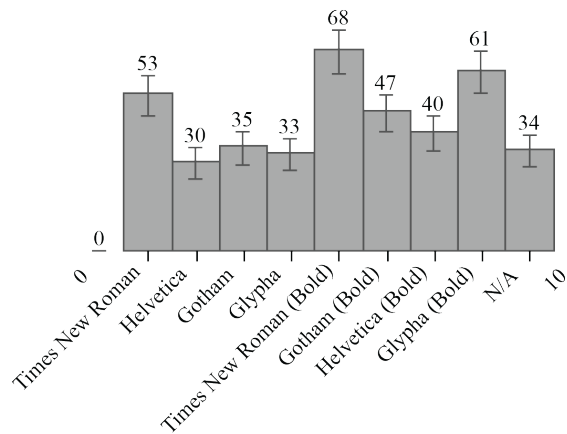
Mean	5.257
Std Dev	2.519
Std Err Mean	0.126
N	401.000

Power**Summary Statistics**

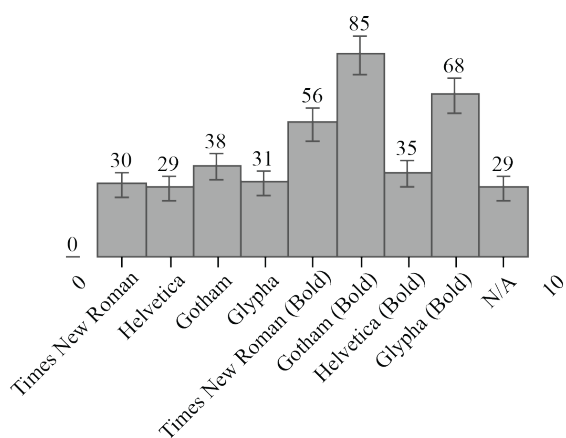
Mean	5.840
Std Dev	1.999
Std Err Mean	0.100
N	401.000

Energy**Summary Statistics**

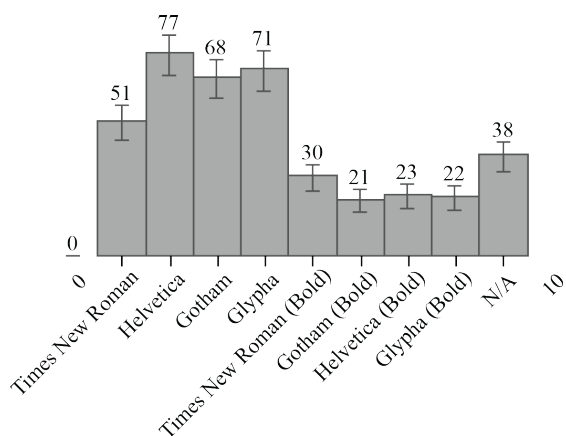
Mean	5.329
Std Dev	2.366
Std Err Mean	0.118
N	401.000

Persuasive**Summary Statistics**

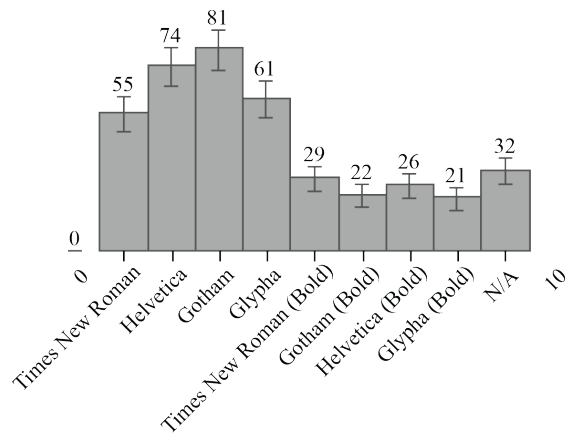
Mean	5.102
Std Dev	2.543
Std Err Mean	0.127
N	401.000

Vigor**Summary Statistics**

Mean	5.401
Std Dev	2.324
Std Err Mean	0.116
N	401.000

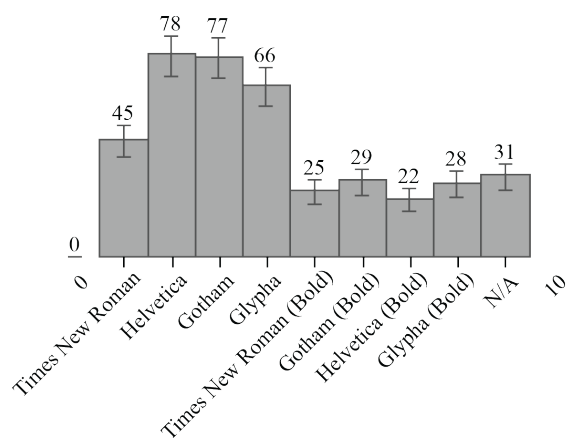
Sympathy**Summary Statistics**

Mean	4.110
Std Dev	2.476
Std Err Mean	0.124
N	401.000

Compassion

Summary Statistics

Mean	4.002
Std Dev	2.428
Std Err Mean	0.121
N	401.000

Kindness

Summary Statistics

Mean	4.120
Std Dev	2.424
Std Err Mean	0.121
N	401.000

Appendix C: IRB Form



HUMAN RESEARCH PROTECTION PROGRAM
INSTITUTIONAL REVIEW BOARDS

To: CHRISTOPHER KOWAL
MTHW

From: JEANNIE DICLEMENTI, Chair
Social Science IRB

Date: 05/09/2014

Committee Action: **Exemption Granted**

IRB Action Date: 05/09/2014

IRB Protocol #: 1405014820

Study Title: Emotion-Triggering Visual Elements, The Role of Visual Communication in Political Campaigns

The Institutional Review Board (IRB) has reviewed the above-referenced study application and has determined that it meets the criteria for exemption under 45 CFR 46.101(b)(2) .

If you wish to make changes to this study, please refer to our guidance "**Minor Changes Not Requiring Review**" located on our website at <http://www.irb.purdue.edu/policies.php>. For changes requiring IRB review, please submit an **Amendment to Approved Study** form or **Personnel Amendment to Study** form, whichever is applicable, located on the forms page of our website www.irb.purdue.edu/forms.php. Please contact our office if you have any questions.

Below is a list of best practices that we request you use when conducting your research. The list contains both general items as well as those specific to the different exemption categories.

General

- To recruit from Purdue University classrooms, the instructor and all others associated with conduct of the course (e.g., teaching assistants) must not be present during announcement of the research opportunity or any recruitment activity. This may be accomplished by announcing, in advance, that class will either start later than usual or end earlier than usual so this activity may occur. It should be emphasized that attendance at the announcement and recruitment are voluntary and the student's attendance and enrollment decision will not be shared with those administering the course.
- If students earn extra credit towards their course grade through participation in a research project conducted by someone other than the course instructor(s), such as in the example above, the students participation should only be shared with the course instructor(s) at the end of the semester. Additionally, instructors who allow extra credit to be earned through participation in research must also provide an opportunity for students to earn comparable extra credit through a non-research activity requiring an amount of time and effort comparable to the research option.
- When conducting human subjects research at a non-Purdue college/university, investigators are urged to contact that institution's IRB to determine requirements for conducting research at that institution.
- When human subjects research will be conducted in schools or places of business, investigators must obtain written permission from an appropriate authority within the organization. If the written permission was not

submitted with the study application at the time of IRB review (e.g., the school would not issue the letter without proof of IRB approval, etc.), the investigator must submit the written permission to the IRB prior to engaging in the research activities (e.g., recruitment, study procedures, etc.). This is an institutional requirement.

Category 1

- When human subjects research will be conducted in schools or places of business, investigators must obtain written permission from an appropriate authority within the organization. If the written permission was not submitted with the study application at the time of IRB review (e.g., the school would not issue the letter without proof of IRB approval, etc.), the investigator must submit the written permission to the IRB prior to engaging in the research activities (e.g., recruitment, study procedures, etc.). This is an institutional requirement.

Categories 2 and 3

- Surveys and questionnaires should indicate
 - only participants 18 years of age and over are eligible to participate in the research; and
 - that participation is voluntary; and
 - that any questions may be skipped; and
 - include the investigator's name and contact information.
- Investigators should explain to participants the amount of time required to participate. Additionally, they should explain to participants how confidentiality will be maintained or if it will not be maintained.
- When conducting focus group research, investigators cannot guarantee that all participants in the focus group will maintain the confidentiality of other group participants. The investigator should make participants aware of this potential for breach of confidentiality.
- When human subjects research will be conducted in schools or places of business, investigators must obtain written permission from an appropriate authority within the organization. If the written permission was not submitted with the study application at the time of IRB review (e.g., the school would not issue the letter without proof of IRB approval, etc.), the investigator must submit the written permission to the IRB prior to engaging in the research activities (e.g., recruitment, study procedures, etc.). This is an institutional requirement.

Category 6

- Surveys and data collection instruments should note that participation is voluntary.
- Surveys and data collection instruments should note that participants may skip any questions.
- When taste testing foods which are highly allergenic (e.g., peanuts, milk, etc.) investigators should disclose the possibility of a reaction to potential subjects.

Appendix D: Jim William's Approval E-mail

From: WILLIAMS James <J.G.Williams@staffs.ac.uk>
Date: October 21, 2014 at 11:30:46 AM EDT
To: Matias Ferrari <ferraric@purdue.edu>
Subject: Re: Reference - Type Matters

Dear Matias,

Thank you for your kind email.
Yes, that's no problem.
I hope the project proves to be successful for you.
Best wishes,

Jim.

On 21/10/2014 14:05, "Matias Ferrari" <ferraric@purdue.edu> wrote:

Dear Jim,

My name is Matias Ferrari, I'm a graduate student in the Master in Fine Arts degree in Visual Communications Design at Purdue University. I'm doing a research related to typeface connotation for my thesis and possibly for a journal article. As part of the literature review, I'm using your book Type Matters, a dear possession I hold close since 2012. With this email I would like to ask for your permission to use page 34 and 35 as figures to show the connotative value of typefaces when setting are pushed to opposite extremes.

Please let me know your thoughts.
Thank you for your book. I've used it in so many lectures for my teaching assistant appointments.

Sincerely,
Matias