THE EFFECT OF TYPEFACE ON THE PERCEPTION OF ONSCREEN DOCUMENTS

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This study investigated the effect that typeface has on a reader's perception of three different types of onscreen documents (business, email, and youth narrative stories). Participants read documents displayed in either a congruent, neutral, or incongruent typeface. Results suggest that the less congruent the typeface, the more the document was perceived in a negative fashion. That is, the typeface itself affected the perceived personality of the document and the perception of the author; thus, typeface appropriateness should be considered when writing an onscreen document.

INTRODUCTION

Many aspects of onscreen document design affect the overall user experience. While aspects such as line length and whitespace (Shaikh, 2005) have been researched, the effect of the typeface selection on the document perception has not been widely evaluated for onscreen documents. Brumberger (2003) claims that the typeface of a written document can create a mood separate from that created by the document. This is because each typeface has a persona of its own, which can affect the mood of the document in three possible ways: it can have a neutral effect, it can coincide with the content of the document reinforcing its mood, or it can conflict with the content of the document creating dissonance.

Since typefaces can affect the mood of the written document, Mackiewicz and Moeller (2004) recommend, "when selecting typefaces, technical communicators should consider the extent to which typefaces contribute to and reinforce the rhetorical effects that they intend for their documents" (p. 304). Shaikh, Chaparro, & Fox (2006) conducted a study that investigated the personas of 20 typefaces viewed onscreen. The second half of the study investigated the appropriate uses for the 20 typefaces. From this study it was determined that certain typeface should be used for particular documents.

In other words, the content of a document may not be the only thing perceived by the reader. The personality of the typeface and the type of document it is paired with could also impact the reader's perception of the document. The intended message of the document should coincide with the typeface in which it is written.

The goal of this study was to investigate whether the font appropriateness (high, medium, or low) as determined by Shaikh, Chaparro, & Fox (2006) would affect the perception of three different document types (business, email, and youth narrative story). Specifically, the study focused on the effect of typeface appropriateness on the perception of the document's personality and author's ethos. It was hypothesized that documents displayed in a more appropriate typeface would be perceived in a more positive fashion, while documents displayed in a less appropriate typeface would be perceived in a more negative fashion.

METHOD

Participants

A total of 120 participants (58% male, 42% female) completed the study and were compensated $10 for their participation. The age range of the participants was 18-54 years with a majority (82.5%) falling in the range of

18-28 years. Approximately 76% of participants reported English as their first language, and 73% reported they read text online at least 2-6 hours per week.

Procedure

Selection of Documents

Three document types (business, email, & youth narrative) were pre-tested in two pilot studies to determine neutrality of content. It was important to establish from the onset of the study that the content of each document was considered neutral so that any differences in the perception of the documents could be attributed to the typeface rather than the content of the document.

The email document found to be most neutral in content was one from a company employee attempting to schedule a meeting and plan a company picnic. A letter from a bank to a client was chosen for the business document. The final document (youth narrative) was a brief nonfiction account explaining how fireworks operate in layperson terms.

Selection of Typefaces

The selection of the three typefaces used for the selected documents was based on previous work by Shaikh, Chaparro, and Fox (2006) that examined user perception of how appropriate 20 typefaces were for a variety of 20 uses (i.e., business documents, web pages, email). The three typefaces chosen (see in Table 1) represent either a high, medium, or low level of appropriateness as indicated by the users.

Table 1. Typefaces used based on appropriateness.

	Business	Email	Youth Narrative
High	Cambria	Calibri	Kristen
Medium	Courier New	Comic Sans	Constantia
Low	Comic Sans	Gigi	Agency FB

Current Study

Participants were shown each of the three documents in one of three typefaces. The order of document presentation was counterbalanced to control for order effects. The documents were displayed in HTML format using Internet Explorer 6.0. The participants were instructed to read the document carefully and then fill out a two-part paper survey when finished reading.

The first section of the survey examined the personality of the document using the same adjective pairs (see Table 2) that were used in previous studies by Shaikh, Chaparro, & Fox (2006). This was based on a four-point Likert scale.

Table 2. Fifteen adjective pairs that were used to assess perceived personality of documents. The scores were based on a 4-point Likert scale.

stable	unstable
flexible	rigid
conformist	rebel
creative	unimaginative
sad	happy
polite	rude
exciting	dull
attractive	unattractive
elegant	plain
youthful	mature
formal	casual
assertive	passive
cuddly	coarse
masculine	feminine
practical	impractical

The second section of the study examined the participants' perceptions of the author and intended audience of the document, otherwise known as the "ethos" section; the questions used in this section were formed based on Brumberger's (2003) study. This section examined perception of the author based on five areas: knowledge, believability, maturity, professionalism, and trustworthiness. This was measured on a seven-point Likert scale.

RESULTS

For both sections of the survey a one-way between subjects ANOVA was used to analyze the relationship between the typefaces and the response to the adjective pairs and the ethos section. To control for familywise Type I errors when making multiple comparisons, the alpha level was adjusted to .005 using the Bonferonni method.

Business Document

There were no significant differences across typefaces on the response to the adjective pairs for the business document indicating that typeface did not have an effect on the perception of the document's personality

Results of the ethos section indicated that the author using Comic Sans was viewed as less mature ($F(2,117) = 5.64$, $p = .005$, $\eta^2 = .09$) than the authors of the letters in Cambria or Courier New; this is shown in Figure 1.
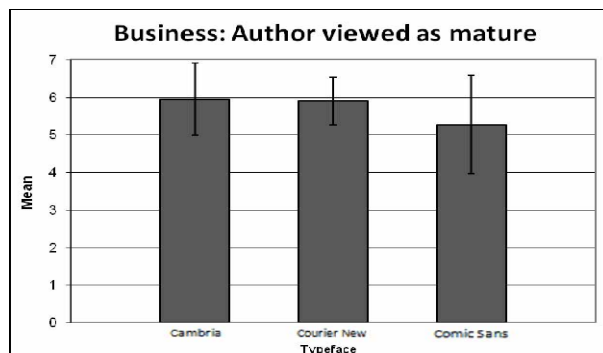

Figure 1. The average scores of the ethos section indicated that the author of the business document written in Comic Sans was viewed less mature than the authors of the Cambria or Courier business documents.

Email Document

The results of the 15 adjective pairs indicated that when the document was presented in Gigi, it was viewed as less stable ($F(2,117) = 8.42$, $p < .003$, $\eta^2 = .13$), and less practical ($F(2,117) = 12.2$, $p < .003$, $\eta^2 = .17$). It was also viewed as more rebellious ($F(2,117) = 7.45$, $p < .003$, $\eta^2 =$

.11), more youthful ($F(2,117) = 9.98$, $p < .003$, $\eta^2 = .15$), and more feminine ($F(2,117) = 6.67$, $p < .003$, $\eta^2 = .10$ than the email presented in either Calibri or Comic Sans. As shown in Figure 2, the Gigi email was perceived as less stable than Calibri or Comic Sans.
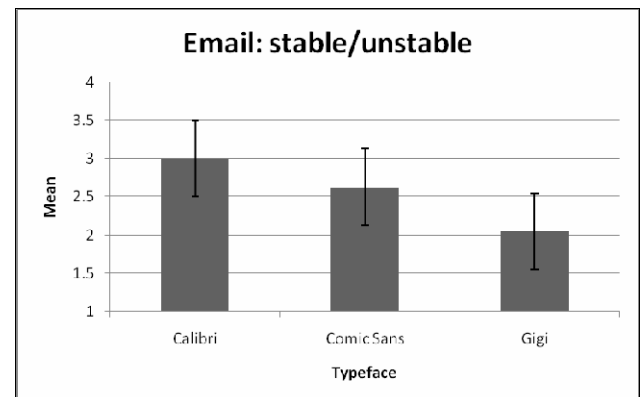

Figure 2. Based on average scores, the document in Calibri was seen as more stable than the documents in Comic Sans or Gigi.

Results from the ethos sections suggested that the author of the Gigi email was less believable ($F(2,117) = 6.40$, $p < .003$, $\eta^2 = .10$), less professional ($F(2,117) = 11.80$, $p < .003$, $\eta^2 = .17$), less trustworthy ($F(2,117) = 11.65$, $p < .003$, $\eta^2 = .17$), and less mature ($F(2,117) = 12.77$, $p < .003$, $\eta^2 = .18$) than the authors of the Calibri or Comic Sans email.

Youth Narrative Document

The document in Kristen (most appropriate) was perceived as more youthful, ($F(2,117) = 6.04$, $p < .005$, $\eta^2 = .09$), and more casual ($F(2,117) = 5.61$, $p = .005$, $\eta^2 = .09$) than the documents presented in Agency FB or Constantia. Figure 3 illustrates the more casual perception of the Kristen document compared to the Agency FB and Constantia documents.
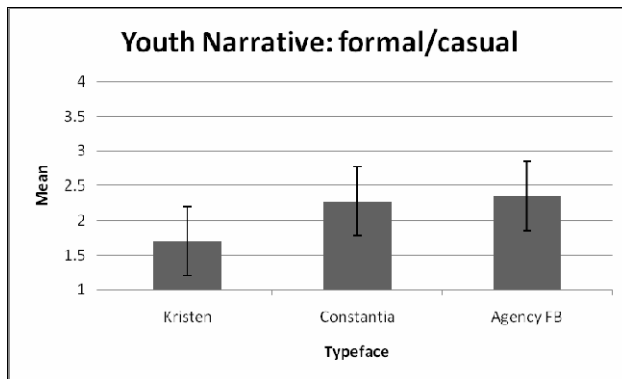
Figure 3. Based on average scores for the 15 adjective pairs Kristen was viewed as more casual than Constantia or Agency FB.

There were no significant differences for the ethos section of the youth narrative article suggesting that the perception of the author was not affected by the typeface it was displayed in.

DISCUSSION

Results reveal that for some documents (such as the email and youth narrative) the typeface can affect the overall perception of the document's personality; when the exact same content was viewed in the differing typefaces, the personality of the document varied by typeface for the email and the youth narrative documents. Additionally, the results indicate that onscreen typeface selection can also affect the perception of the author's ethos in some cases.

The email document presented in Gigi (a less appropriate typeface) was perceived as less stable, less practical, more rebellious, more youthful, and more feminine. Moreover, the author of the email in Gigi was perceived as less believable, less professional, less trustworthy, and less mature. Based on the results of this study, if an author intends for an email to be perceived in a more serious manner, it should not be presented in a typeface (such as Gigi) that is perceived as inappropriate.

Additionally, the typeface chosen for an email affects the way the author is perceived. Again, a more appropriate typeface results in a more positive perception of the author. Calibri (high

in appropriateness) consistently resulted in a more positive perception of the email than Gigi. Differences between Calibri and Comic Sans were not significant in this study. While these results were not expected, they could be due to the prevalence of Comic Sans in many areas of onscreen communication. Users may have grown accustomed to seeing Comic Sans in many situations which could impact its perceived appropriateness. As a general recommendation, care should be taken when choosing typefaces for email communication to make sure the typeface in accord with the intention of the document.

When evaluating the youth narrative document, participants perceived the document as more youthful and more casual when presented in Kristen. Kristen was the most appropriate typeface for this sort of document. Again, these results offer support for the importance of choosing typefaces that are viewed as appropriate for the document type. Minimal differences were found between the medium- and low appropriate typefaces which seem to indicate that there are subtle differences when the typeface is not seen as highly appropriate. The perception of the author was not affected by the typeface in spite of the varying levels of appropriateness. The youth narrative document was not labeled as a document intended for a younger audience which could have impacted the overall interpretation of this document.

With the exception of the author being perceived as less mature, there were no other findings for the business document. These findings are challenging to explain but could be due to the sample used in the study. The sample was largely made up of college students that do not typically view documents of this type; therefore, a more representative sample of the population that typically interact with these types of documents may have an effect on how they are perceived. For example, managers or business affiliates rating the business documents might result in a more accurate representation of the effect typeface has on a business document.

When creating onscreen documents, the typeface should be chosen only after careful consideration. The typeface can affect the overall personality of the document as well as the perception of the author. As the results of this study indicate, the personality of the document often takes on the personality of the typeface. This can be detrimental to the overall message if the typeface personality is not congruent with the content of the document. Additionally, inappropriate typefaces tended to create a negative perception of the author's ethos for some documents tested.

While this study provided initial insight into the perception of onscreen document personalities and author's ethos based on typeface appropriateness, there is still much work to be done. Future studies need to fully explore the underlying dimensions that explain the perception of onscreen typefaces. By expanding the list of adjective pairs to include more relevant adjectives, the personality of onscreen typefaces could be fully explained. Additionally, the appropriateness of the typefaces for each document was determined by Shaikh, Chaparro, and Fox (2006) through the use of dichotomous yes/no questions. A more comprehensive way of determining appropriateness, such as a forced choice paradigm, should be utilized. Finally, a wider variety of onscreen documents should be evaluated with using a more appropriate audience to determine the effect of the appropriateness on the perception of the author's ethos.

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