The Effect of Typeface on the Perception of Email

By A. Dawn Shaikh, Doug Fox, & Barbara S. Chaparro

Summary: This study investigated the effect that a font has on the reader's perception of an email. Based on a previous study by Shaikh, Chaparro, and Fox (2006), a sample email message was presented in three fonts (Calibri, Comic Sans, and Gigi). The three chosen fonts represented a high, medium, and low level of congruency for email messages. The least congruent typeface (Gigi) resulted in different perceptions of the email document and its author. However, no significant differences were found between the moderately and highly congruent fonts.

INTRODUCTION

Email is arguably the most common and popular form of computer-mediated communication. The Digital Future Report published this year by the USC Annenberg School for Communication found that 69.7% of all Americans use email (http://digitalcenter.org) for personal and business-related communication. Similarly, eMarketer (http://www.emaillabs.com/resources/resources_statistics.html) reports that 147 million people in the United States use email on a daily basis.

While email has pervaded many people's personal lives, it is an integral part of the typical work day as well. Within business organizations and educational institutions, email is a prevalent form of communication (Dabbish, Kraut, Fussell, & Kiesler, 2005; Tassabehji & Vakola, 2005). Surveys conducted by Dabbish and colleagues indicate that typical university email users send an average of 14 emails per day and read approximately 30 per day. In the business world, email is a daily part of the typical routine and is often at the center of new work practices (Tassabehji & Vakola). Tassebehji and Vakola reported that one-third of their survey respondents viewed email as a crucial part of their job and half believed email assisted them in doing their job better. Additionally, email was credited with improving teamwork, collaboration, and information flow.

While email is viewed as a rapid and productive means of communication, it is also seen as more impersonal and brief (Tassabehji & Vakola, 2005). Since email is commonly used for personal as well as professional communication, it is imperative to understand the ramifications of personal choices when composing emails. Users can either choose to accept the default typeface of the email client or to change the typeface. Typeface is an important part of visual rhetoric – type has the ability to communicate on its own. Typeface selection can set the mood of the document, provide information about the author's ethos, and reveal areas of importance. This role is commonly known as the aesthetic or semantic role of typeface or the "apparent 'fitness' or suitability for different functions, ... which imbue it with the power to evoke in the perceiver certain emotional and cognitive responses" (Bartram, 1982, p. 38). Researchers such as Brumberger (2003) have pointed out that typefaces can have a persona which creates a mood for text. Typefaces can influence the mood of a document in three possible ways: the typeface may reinforce the text and mood; the typefaces may conflict with the message/mood; or there may be no influence resulting in a neutral effect.

The purpose of this study was to investigate the effect of selected typefaces on the perception of the email creator's ethos and gender. In addition, the perceived personality of the email document was evaluated.

METHOD

Participants

A total of 120 participants (58% male, 42% female) completed the survey and were compensated $10 for their participation in the study. 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.

Selection of Stimuli

A sample email was displayed in one of three fonts (Calibri, Comic Sans, or Gigi) as shown in Figures 1-3. The content of the email was pre-tested using 15 adjective pairs as reported in Shaikh, Chaparro, and Fox (2006) and determined to be neutral. Two preliminary studies were run to determine neutrality. The first study consisted of sixty participants viewing one of three different email documents and rating it on 15 adjective pairs using a five-point scale (a middle point was added to represent neutral). Figure 4 shows the adjective pairs used in all of the studies. In the second preliminary study, participants were asked to think of a typical email and then rate it using the same 15 adjective pairs on a five-point scale. From the results of the two preliminary studies, neutrality was determined using means analysis for the three email documents. The most neutral email was selected for use in the study being reported in this paper.

Hey,

First of all, Thanks to Gina for doing such a wonderful job on the meeting minutes from last week. Now, we need to meet again to revise the company hiring policy and the plans for the summer barbeque. I know Todd has made a reservation for a shelter at the park, but I think we need to figure out where the food is coming from, what we will be serving, and (most importantly) who is cooking. Anyway, please email me and let me know which days this week and next week are best for you. I will then choose a date and place and let everyone know when and where. Until then, take care.

~~T~~

Figure 1. Email presented in Calibri font.

Hey,

First of all, Thanks to Gina for doing such a wonderful job on the meeting minutes from last week. Now, we need to meet again to revise the company hiring policy and the plans for the summer barbeque. I know Todd has made a reservation for a shelter at the park, but I think we need to figure out where the food is coming from, what we will be serving, and (most importantly) who is cooking. Anyway, please email me and let me know which days this week and next week are best for you. I will then choose a date and place and let everyone know when and where. Until then, take care.

‒

~~ | ~~

Figure 2. Email presented in Comic Sans font.

Hey,

First of all, Thanks to Gina for doing such a wonderful job on the meeting minutes from last week. Now, we need to meet again to revise the company hiring policy and the plans for the summer barbeque. I know Todd has made a reservation for a shelter at the park, but I think we need to figure out where the food is coming from, what we will be serving, and (most importantly) who is cooking. Anyway, please email me and let me know which days this week and next week are best for you. I will then choose a date and place and let everyone know when and where. Until then, take care.

--J--

Figure 3. Email presented in Gigi font

Stable ○ ○ ○ ○ Unstable	Polite ○ ○ ○ ○ Rude	Formal ○ ○ ○ ○ Casual
Flexible ○ ○ ○ ○ Rigid	Exciting ○ ○ ○ ○ Dull	Assertive ○ ○ ○ ○ Passive
Conformist ○ ○ ○ ○ Rebel	Attractive ○ ○ ○ ○ Unattractive	Cuddly ○ ○ ○ ○ Coarse
Creative ○ ○ ○ ○ Unimaginative	Elegant ○ ○ ○ ○ Plain	Masculine ○ ○ ○ ○ Feminine
Sad ○ ○ ○ ○ Happy	Youthful ○ ○ ○ ○ Mature	Practical ○ ○ ○ ○ Impractical

Figure 4. Adjective pair list on the four-point Likert scale.

The selection of the three fonts used for the neutral email was based on previous work by Shaikh, Chaparro, and Fox (2006) that examined user perception of how appropriate 20 fonts were for 25 uses (i.e., business documents, web pages, email). In this previous study, participants viewed pangrams displayed in each font and checked the uses they would deem appropriate for the font presented. Using frequency analyses, percentage tables were created for how often participants would use a font for a particular use. Table 1 shows the percentages for each of the 20 fonts for the use of email. The three fonts chosen for this study represent either a high (Calibri), medium (Comic Sans), or low (Gigi) level of appropriateness as deemed by the users.

Table 1. Rank order of fonts that should be used for email

email	
Calibri	**43.40%**
Corbel	41.51%
Candara	41.26%
Cambria	41.13%
Verdana	40.88%
Arial	40.38%
Times New Roman	38.87%
Constantia	**38.49%**
Georgia	36.73%

Century Gothic	36.23%
Comic Sans	**27.80%**
Courier New	23.90%
Consolas	23.27%
Monotype Corsiva	21.64%
Kristen ITC	18.87%
Agency FB	15.60%
Rage Italic	13.46%
Gigi	**11.07%**
Rockwell Extra Bold	9.81%
Impact	8.93%

Procedure

Participants were shown the email document in one of three fonts (Calibri, Comic Sans, or Gigi). The email 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 paper-based survey when finished reading. The survey consisted of two sections: the first section of the survey examined the persona of the document using the same adjective pair list and the 4-point scale that was used in Shaikh, Chaparro, and Fox (2006). The second section evaluated the perception of the author's "ethos" and perception of the intended audience. Questions for this section were based on Brumberger's (2003) study.

The ethos section was divided into two parts. Part 1 examined perception of the author based on five areas: knowledge, believability, maturity, professionalism, and trustworthiness. This was measured on a seven-point scale (-3 to +3) as shown in Figure 5. The last question used a five-point scale to rate the employment level of the email's author as shown in Figure 6. Part 2 examined the participant's perception of gender and age of the author and the intended audience. See Figures 7 and 8 for an example of these two questions.

The author of this document would best be described as						
Extremely Unprofessional	Very Unprofessional	Somewhat Unprofessional	Neither Professional Nor Unprofessional	Somewhat Professional	Very Professional	Extremely Professional
-3	-2	-1	0	+1	+2	+3

Figure 5. Example question of perception of author's ethos based on a seven-point scale.

The author of this text passage is most probably a				
Management Trainee	Junior Level Manager	Mid Level Manager	Senior Level Manager	Not possible to tell

Figure 6. Example question of perception of author's employment level.

What gender do you think the AUTHOR of this document is

| Male | Female | Not possible to tell |

Figure 7. Example question for gender.

What is the age range of the AUTHOR of this document?						
20 years or younger	21-30 years	31-40 years	41-50 years	51-60 years	Greater than 60 years	Not possible to tell

Figure 8. Example question for age.

RESULTS

A one-way between subjects ANOVA was used to analyze the relationship between the fonts for the adjective pair list. The levels of the independent variable (typeface) were Calibri, Comic Sans, and Gigi. The dependent measure was the score on each of the adjective pairs. To control for familywise Type I errors when making multiple comparisons, the alpha level was set to .005. Table 2 shows the means and standard deviations for the adjective pair list for each of the fonts. The email presented in Gigi 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 ($F(2,117) = 7.45$, $p < .003$, $\eta^2 = .11$), youthful ($F(2,117) = 9.98$, $p < .003$, $\eta^2 = .15$), and feminine ($F(2,117) = 6.67$, $p < .003$, $\eta^2 = .10$) than the emails in either Calibri or Comic Sans.

A one-way between subjects ANOVA was also used to evaluate the three emails for the second section of the survey. Results suggest that the email presented in Gigi was less believable ($F(2,117) = 6.40$, $p < .003$, $\eta^2 = .10$). The author of this same document was perceived as 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 ($F(2,117) = 12.77$, $p < .003$, $\eta^2 = .18$). The means and standard deviations for the second section of the survey are shown in Table 3.

A two-way Chi Square was used to evaluate the perception of gender for the author and intended audience, the position level in the company, and the age of the author and audience. Results suggest that the author was most likely female and presumed to be at the trainee level, rather than higher up in the company (χ^2 (2, N=120) = 6.14, $p < .05$; χ^2 (2, N=120) = 15.74, $p < .01$).

Table 2. Means and standard deviations for 15 adjective pair list. This was used to assess the personality of the email documents. Those in bold were significant.

Personality Traits (4/1 scale)	Calibri m(SD)	Comic m(SD)	Gigi m(SD)
stable/unstable	**3.00 (1.09)**	**2.63 (1.06)**	**2.05 (.99)**
flexible/rigid	3.17 (1.06)	3.25 (.81)	3.25 (.87)
conformist/rebel	**2.87 (.98)**	**2.85 (.86)**	**2.18 (.90)**
creative/unimaginative	2.73 (.93)	2.62 (1.08)	2.95 (.93)
sad/happy	1.53 (.60)	1.60 (.67)	1.48 (.72)
polite/rude	3.40 (.74)	3.30 (.82)	3.20 (.82)
exciting/dull	2.75 (.81)	2.62 (1.01)	2.75 (.98)
attractive/unattractive	2.73 (.72)	2.58 (.96)	2.65 (1.00)

elegant/plain	2.18 (.90)	2.00 (.93)	2.50 (.93)
youthful/mature	**2.78 (.83)**	**2.78 (.92)**	**3.53 (.85)**
formal/casual	1.63 (.95)	1.40 (.81)	1.35 (.70)
assertive/passive	2.30 (.91)	2.35 (.92)	2.30 (.94)
cuddly/coarse	2.85 (.66)	2.80 (.76)	2.95 (.88)
masculine/feminine	**2.15 (1.05)**	**1.90 (1.01)**	**1.40 (.71)**
practical/impractical	**3.05 (.78)**	**2.98 (1.03)**	**2.13 (.97)**

Table 3. Mean and Standard deviations for the second section of survey. This was used to assess the perception of the author and intended audience. Those in bold were significant.

Ethos Questions (1-7 scale)	Calibri m(SD)	Comic m(SD)	Gigi m(SD)
How knowledgeable is the author	4.80 (1.36)	4.80 (1.44)	4.08 (1.46)
How would you rate the information provided	**5.60 (.95)**	**5.48 (1.11)**	**4.78 (1.25)**
Author described as professional	**4.53 (1.52)**	**4.18 (1.48)**	**3.05 (1.24)**
Author described as mature	**4.88 (1.20)**	**4.63 (1.23)**	**3.55 (1.30)**
Author described as trustworthy	**5.33 (.92)**	**5.28 (1.09)**	**4.33 (1.12)**

DISCUSSION

The results from this study suggest there is a relationship between typeface selection and the reader's perception of an email. The email presented in the typeface that was judged in previous studies to be low in appropriateness for email (Gigi) was perceived to be less stable, less practical, more rebellious, and more youthful than either Calibri (highly appropriate) or Comic Sans (moderately appropriate). This finding suggests that documents presented in typefaces that are viewed as less appropriate are seen as less serious and less professional in nature. The appropriateness of the typeface also affected the perception of the email author in that the email using Gigi created a perception of an author who is less professional, less trustworthy, and less mature. Finally, the typeface that was lower in appropriateness led participants to conclude that the author was a lower level trainee employee. When choosing a typeface for a document, the level of appropriateness should be taken into account in order to avoid sending unintentional messages.

The results did not find significant differences between the moderately and highly appropriate typefaces. In previous work Shaikh, Chaparro, and Fox (2006) found that Comic Sans was perceived as happier, more cuddly, younger, and more passive than Calibri. However, in the present study, significant differences were not found on these adjectives. A possible explanation for this is that Comic Sans has become so commonly used, that readers have become immune to its casual, happy nature.

The millions of people that email friends, family members, and co-workers should be aware of the fact that typeface can have an effect on the perception of the content. Typefaces should be chosen to reflect the message of the content and care should be taken to ensure that the typeface does not conflict with the intentions of the author.

REFERENCES

Bartram, D. (1982). The perception of semantic quality in type: Differences between designers and non-designers. Information Design Journal, 3, p. 38-50.

Brumberger, E. (2003). The rhetoric of typography: The persona of typeface and text. Technical Communication, 50(2), 206-223.

Dabbish, L., Kraut, R., Fussell, S., & Kiesler, S. (2005). Understanding email use: Predicting action on a message. CHI 2005 (pp. 691-700). Portland, OR: ACM.

Shaikh, A. D., Chaparro, B. S., & Fox, D. (2006) Perception of fonts: Perceived personality traits and uses. Usability News, 8(1). Retrieved November 12, 2006, from http://psychology.wichita.edu/surl/usabilitynews/81/PersonalityofFonts.asp

Tassabehji, R., & Vakola, M. (2005). Business email: The killer impact. Communications of the ACM , 48 (11), 64-70.

SUBSCRIBE to *Usability News*!