Usability News

June 2010, *Vol. 12 Issue 1*

| Volume 12 Issue 1 | Past Issues | A-Z List |

Usability News is a free web newsletter that is produced by the Software Usability Research Laboratory (SURL) at Wichita State University. The SURL team specializes in software/website user interface design, usability testing, and research in human-computer interaction.
Barbara S. Chaparro, Editor

Free Will for Typeface Selection: Myth or Reality?

Doug Fox

Summary. Typeface appropriateness is important to consider when creating a document so that the typeface persona does not conflict with the intent/content. Unfortunately, the design of many typeface choice sets (e.g. Microsoft Word) are not optimal. The size and organization of most typeface choice sets may cause users to avoid the decision of selecting a typeface different from the default. This reliance on the status quo typeface (e.g. Arial, Calibri, Cambria, and Times New Roman) may lead users to use less appropriate typefaces for their document type. This study examined whether there is evidence to support the hypothesis that the status quo bias is exhibited when selecting a typeface. It also examined whether there are limitations to which typeface is accepted as the status quo. Results of this study lend support to the hypothesis that users exhibit the status quo bias for typeface selection, and also show that there are limitations to which typeface will be accepted as the status quo.

INTRODUCTION

It has been well established that typefaces have a persona all their own (Brumberger, 2003; Fox, Shaikh, & Chaparro, 2007; Mackiewicz & Moeller, 2004). Depending on their features (serifs, stroke weight, etc.), typefaces can be formal, youthful, funny, etc. For example, typefaces with heavier strokes are considered strong, aggressive, and masculine, while typefaces with lighter stroke weights are considered delicate, gentle, and feminine (White, 1988).

Since typefaces have a persona all their own, it is important to consider typeface appropriateness when creating a document. The typeface persona should match the intent/content of the document. If it does not, then there will be conflict between the perceptions of the document and typeface, which can cause both document and author to be misperceived (Shaikh, 2007). For example, the author of an email displayed in Gigi was perceived as less professional, trustworthy, and mature than the same email presented in Courier New or Calibri (Shaikh, Fox, & Chaparro 2007). Many other studies have been conducted to evaluate typeface appropriateness for documents such as ads (Ovink, 1938), newspapers/magazines (Haskins, 1958), and resumes (Shaikh & Fox, 2008).

While typeface appropriateness has been well studied, the selection process by which users decide on a typeface has not. Users are commonly faced with the challenge of selecting a typeface from long lists (i.e., Microsoft Word or Photoshop). Research in Judgment and Decision Making has clearly shown that decision makers have sub-optimal performance in conditions such as these. Two factors contribute to this problem: 1) size of the choice set and 2) attractiveness of options.

As the number of options increase within a choice set, a decision maker's ability to handle the decision decreases (Anderson, 2003; Iyengar & Lepper, 2000). This is problematic, as the number of typefaces

commonly listed in software today is well over one hundred. Also, typefaces are commonly listed in alphabetical order, providing no guidance or reasoning as to which typeface is the best to use for document creation. This can create a conflicting decision in which it is difficult to determine the best choice because so many similar typefaces are competing for the user's attention (Tversky & Shafir, 1992). Thus, typefaces need to be organized so that it increases the attractiveness of typefaces for a particular document.

These two design issues make most typeface choice sets highly unusable, especially for less experienced users. Complex choice sets such as these can lead to users avoiding decisions (Anderson, 2003; Dhar, 1997). This can manifest into users relying heavily on the default typeface (e.g., Times New Roman in Microsoft Word 2003) listed in a choice set, thereby causing them to exhibit the status quo bias. The status quo bias is a decision maker's inflated preference for the current state even though it may not be optimal for the decision being made (Sameulson & Zeckhauser, 1988). The status quo bias has been well-studied and established across many domains including the medical field (Johnson & Goldstein, 2003), consumer privacy on the web (Lai and Hui, 2006), and financial markets (Kempf & Ruenzi, 2006).

Purpose

The purpose of this study was two-fold. First, it investigated whether the status quo bias applies to the domain of typeface selection. Second, if indeed the status quo does influence typeface selection, then we wanted to investigate whether the style (serif, sans serif, script/handwriting, or display) affects whether the typeface is accepted as the status quo. It was predicted that the less appropriate a default typeface is for a particular document, the less likely it is the user will exhibit the status quo bias.

EXPERIMENT 1

Experiment 1 investigated whether the status quo bias actually exists for typeface selection. This was done by determining how frequently users chose the default typeface in Word Processing applications.

METHOD

Participants

Sixty-six student papers were evaluated for default typeface usage. The papers were assignments that students turned in for a course grade. All of the papers came from Psychology courses. Based on reports from instructors, there were no stipulations for which typeface to use for the assignment.

Materials & Procedure

Information was collected on the type of word processor and the typeface each student used to write the paper. Students were not aware that their papers were being evaluated for typeface choice. Each student's paper was assessed as to whether or not they used the default typeface. For example, if the student reported that they used Word 2003, it was recorded whether they used Times New Roman or a different typeface for the paper. If the student used Word 2007, it was recorded whether they used the default typeface Calibri or something else.

RESULTS

A chi-square goodness-of-fit test revealed that significantly more papers were presented in the default typeface than a non-default typeface, $\chi^2(1, N = 66) = 7.33$, $p < .01$. The results support the hypothesis that users are likely to exhibit the status quo bias when selecting a typeface.

DISCUSSION

The importance of this study is that it provides potential evidence that the status quo bias is exhibited when selecting a typeface. Word 2003 users report using Times New Roman more than any other typeface; likewise, Word 2007 users report using Calibri more than any other typeface. A possible issue

with users relying on the status quo bias is that it could lead to an inappropriate typeface selection. For example, using Times New Roman for a party invitation that is meant to be fun and light-hearted may not be the best choice. In this study, we do not know whether students chose the default typeface more due to the status quo bias or because they really believed it was the most appropriate typeface for their paper. Experiment 2 examines this in more detail.

EXPERIMENT 2

Experiment 2 investigated what styles of typeface are accepted as the default. This will test the limits of the status quo bias. It is hypothesized that more ornate typefaces like the script/handwriting and display styles will not be accepted as the status quo, while more traditional typefaces like serif and sans serif styles will be accepted as the default.

METHOD

Participants

Eighty students (female = 63 and male =17) from a Midwestern University participated in this study. Most of the students (76%) were between the ages of 18-29. Most students had a moderate to strong background in using a computer and office software. Nearly 84% reported using the computer daily. The new 2007 version of Office was used the most (45%), with the 2003 version being used the second most (35%). Most users (70%) reported that they used Microsoft Word at least a few times a week or more, while only 30% of users used Microsoft Excel a few times a week or more. However, nearly all users (95%) reported using Excel at some time.

Materials

Microsoft® Word 2007 was used to create and edit the documents. Three document types (assignment, resume, and spreadsheet) were evaluated. Each of the three documents were displayed in four styles of typefaces: serif, sans serif, script/handwriting, and display. These are the four styles found to be the most commonly used by Shaikh (2007). The typefaces used to represent each style are presented in Table 1. Times New Roman and Calibri were used because they are the defaults for Word 2003 and Word 2007. Monotype Corsiva and Juice ITC were used because they were found to be popular typefaces for their respected styles by Shaikh (2007). Moreover, all of these typefaces were selected because they are readily available in Microsoft Word®. A 12-point font size was used. The content of the documents had been deemed "neutral" in a previous study by Shaikh (2007).

Table 1. List of typefaces used for each style.

Style	Typeface
Serif	Times New Roman
Sans Serif	Calibri
Script/Handwriting	*Monotype Corsiva*
Display	Juice ITC

Procedure

Participants were led to believe that the purpose of the study was to investigate how usable Office 2007 is compared to its predecessor, Office 2003. The true purpose of the study was not revealed until after the study. They were informed that in order to evaluate Office 2007 they were to read and edit three documents and make them appear as “professional” as possible. The default typeface was a between-subjects variable, so participants did not see every typeface used in the study. Participants were presented with three document types to edit - a resume, an assignment, and a spreadsheet. The directions for the resume documents were as follows:

The purpose of this study is to investigate how users interact with Microsoft® Word 2007 as an editing and formatting tool compared to the previous version, Microsoft® Word 2003. Therefore, pretend you are in the following scenario:

You have just finished writing your resume. This is your dream job that you are applying for; thus, you want to ensure that everything is as PROFESSIONAL as possible. Proofread the resume to double-check for any text or formatting errors. Feel free to change any of the design or text of the resume. Remember, you want to make the BEST impression possible to your potential employer.

After reading the directions, participants had an unlimited amount of time to edit the document. The instructions were similar for each document type. After editing the three documents, the experimenter recorded whether or not the default typeface was changed, and if it was changed, to what typeface it was changed.

RESULTS

A chi square goodness-of-fit was used to evaluate whether there were any difference between the number of times the typeface was changed from the default. Times New Roman (serif), Calibri (san serif), Monotype Corsiva(script/handwriting), and Juice ITC (display) were all compared. Results reveal that for each document, the default typeface was changed more when in an ornate (script/handwriting and display) typeface than when in a traditional typeface (serif and sans serif): assignment, X^2 (3, N = 80) = 27.91, $p < .01$; resume, X^2 (3, N = 80) = 24.93, $p < .01$; spreadsheet, X^2 (3, N = 80) = 22.26, $p < .01$. Tables 2a, 2b, and 2c show thenumber of changes to the default for each condition.

Table 2a. Number of changes to default for the ASSIGNMENT document.

Default Typeface	Number of Changes
Times New Roman	1
Calibri	1
Monotype Corsiva	18
Juice	20

Table 2b. Number of changes to default for the RESUME document.

Default Typeface	Number of Changes
Times New Roman	1
Calibri	1
Monotype Corsiva	11
Juice	17

Table 2c. Number of changes to default for the SPREADSHEET document.

Default Typeface	Number of Changes
Times New Roman	2
Calibri	2
Monotype Corsiva	13
Juice	18

A frequency analysis also revealed that the typeface was changed back to common default found in Office software (Times New Roman, Calibri, and Cambria) in 91 out of 105 instances. In other words, even though the typeface was changed, the majority of changes resorted back to the normal default found in Office. This provides further evidence of the status quo bias being exhibited for typeface selection because, often times, the status quo is based on our familiarity with the options within the choice set (Samuelson and Zeckhauser, 1988). The default typefaces (Arial, Calibri, Cambria, and Times New Roman) for Microsoft Office products have become so familiar that they have become users' status quo. Since these have become the status quo, users find it more difficult to deviate from using these typefaces across all documents, possibly leading to a wrong choice. Table 3 lists the frequencies for the typefaces changed from the default.

Table 3. Frequencies of those typefaces that were changed from the default. Bold typefaces are those that are the default for Office software.

Typeface	Frequency
Adobe Garamond Pro	3
Arial	**18**
Arial Black	1
Arial Narrow	1
Arial Rounded MT Bold	1
Arno Pro	2
Bradley Hand ITC	1
Calibri	**10**
Cambria	**6**
Goudy Old Style	1
Helvetica Narrow	1
Lucid Sans	2
Tahoma	1
Times New Roman	**57**

DISCUSSION

Experiment 2 demonstrates there are limitations to what is accepted as the status quo. Ornate typefaces are not accepted as the default, while more traditional typefaces are accepted. Further evidence for the status quo bias was demonstrated by the fact that even when users changed the typeface, they changed it back to a familiar typeface that is commonly set as the default in Microsoft Office products (Arial, Times New Roman, Calibri, and Cambria). Thus, users understand the importance of typeface selection, but are highly reliant on familiar typefaces.

GENERAL DISCUSSION

This reliance on the status quo bias manifests from the sub-optimal design of the choice set. Hundreds of typefaces are displayed alphabetically making the decision process highly difficult and complex.

Methods for debiasing the status quo bias for typeface selection need to be explored. Possible ways of decreasing the difficulty of typeface selection is either to reduce the number of typefaces to a more manageable size, or provide better guidance as to which typeface is the most appropriate. One way of providing better guidance is to group typefaces by their persona (e.g., feminine, exciting, etc.) or appropriate use (business, school assignments, etc.).

Since the completion of this study, it has been discovered that Microsoft Word 2008 (Mac edition) has actually implemented a design similar to the one proposed through the Font Book application. Some of

the typefaces in the choice set have been organized by different personas or uses. However, it is unclear whether these groupings are based on empirical evidence.

Other attempts to aid typeface selection include templates in Microsoft Office. Templates include common documents such as resumes, flyers, invitations, etc. However, as Brumberger (2003) suggests, the typefaces used in these templates are commonly based on the designer's subjective opinion, rather than empirical evidence. It is recommended that aids, such as choice set groupings and templates be based on empirical evidence found from studies that have evaluated typeface appropriateness.

The results of this study imply that the status quo bias may be playing a role in typeface selection. The method of choosing a typeface in programs such as word processors enhances this bias. Different methods of presentation need to be explored in order to debias this effect, otherwise writers will remain over-reliant on the status quo to make typeface selections.

REFERENCES

Anderson, C. J. (2003). The psychology of doing nothing: Forms of decision avoidance result from reason to emotion. Psychological Bulletin, 50 (2), 224-231.

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

Dhar, R. (1997). Context and task effects on choice deferral. Marketing Letters, 8 (1), 119-130.

Fox, D., Shaikh, A. D., & Chaparro, B. S. (2007). The effect of typeface appropriateness on the percepton of documents. Proceedings of the Human Factors & Ergonomics Society 51st Annual Meeting, 51, pp. 464-468. Baltimore.

Haskins, J. B. (1958). Testing suitability of typefaces for editorial subject-matter. Journalism Quarterly, 35, 186-194.

Iyengar, S. S., & Lepper, M. R. (2000). When choice is demotivating: Can one desire too much of a good thing? Journal of Personality and Social Psychology, 79 (6), 995-1006.

Johnson, E. J., & Goldstein, D. (2003). Do defaults save lives? Science, 302, 1338-1339.

Kempf, A., & Ruenzi, S. (2006). Status quo bias and the number of alternatives: An empirical illustration from the mutual fund industry. The Journal of Behavioral Finance, 7 (4), 204-213.

Lai, Y.-L., & Hui, K.-L. (2006). Internet opt-in and opt-out: Investigating the roles of frames, defaults and privacy concerns. Special Interest Group on Computer Personnel Research Annual Conference. Claremont, CA.

Mackiewicz, J., & Moeller, R. (2004). Why people perceive typefaces to have different personalities. International Professional Communication Conference, Minneapolis.

Ovink, G. W. (1938). Legibility, atmosphere-value and forms of printing type. Leiden, Holland: Sijthoff's Uitgeversmaatschappij N.V.

Samuelson, W., & Zeckhauser, R. (1988). Status quo bias in decision making. Journal of Risk and Uncertainty, 1, 7-59.

Shaikh, A. D. (2007, May 1). Psychology of onscreen type: Investigations regarding typeface personality, appropriateness, and impact on document perception. Unpublished Dissertation . Wichita, KS, United States: Wichita State University.

Shaikh, A. D., & Fox, D. (2008, May). Does the typeface of a resume impact our perception of the applicant? Retrieved from http://surl.org/usabilitynews/101/pof.asp.

Tversky, A., & Shafir, E. (1992). Choice under conflict: The dynamics of deferred decision. Psychological Science, 3 (6), 358-361.

White, J. V. (1988). Graphic design for the electronic age: The manual for traditional and desktop publishing. New York, NY: Watson-Guptill Publications and Xerox Press.
