

## 02.218 INTRODUCTION TO PSYCHOLOGY RESEARCH PROJECT REPORT

### WHAT IS YOUR TYPE? - A STUDY ON THE EASE OF MANIPULATING CHOICES USING TYPEFACES & SALIENT FORCING

#### 1. ABSTRACT

As part of 02.218: Introduction to Psychology course, this research project explored the ease of manipulating choices using typefaces and salient forcing. Inspired by the notion that typefaces influence our choices by subtly affecting our crossmodal correspondences (Velasco, Woods, Deroy & Spence, 2015), an experiment was specially designed with elements of salient forcing in the form of long exposure. A total of 50 undergraduates from Singapore University of Technology and Design (SUTD) were put through this experiment to see if they have a skewed preference for a certain typeface, and whether the implemented salient forcing would change their preferences. The results from our experiment strongly suggest that people indeed have preferred typefaces, which they found appealing. Furthermore, these preferences were well retained to the point of not having significant effects on their choices despite attempts of manipulation via salient forcing. Future studies could explore the effects on participants' choices using different forms of salient forcing.

*Good*

#### 2. INTRODUCTION

Making choices is part and parcel of everyday life. While logical reasoning is often expected to guide decision-making, certain situational factors, whether noticed or unnoticed, can also play a decisive role. Even though some situational factors have been shown to impact and subsequently shape user behavior, most people generally disregard the influence of these factors and claimed to have come to the decision autonomously (Wansink & Sobal, 2007). To study this phenomenon, a subtle yet powerful method to influence decisions, salient forcing,

- example

of processing, and typeface liking could influence taste. What is more interesting and applicable to students is a quasi-experiment conducted by a university student, Phil Renaud, in 2006. Over the course of six semesters, Renaud wrote 52 essays for his classes. Towards the end of his last semester, Renaud's average essay score began improving and he realized that the only difference in his essays were the typeface used. After reviewing all of his essays, it turns out that "Georgia Typeface" led to the highest essay scores compared to "Times New Roman Typeface" and "Trebuchet MS Typeface". His results inspired a follow up experiment by Errol Morris where his results proved the existence of a typeface, specifically "Baskerville Typeface" that promotes, or at least engenders the belief that a sentence is true (Errol Morris, 2012). This follow up study involved asking a total of 45,000 participants to rate the credibility of a passage based on different typefaces through an online survey.

The motivation of this project is to demonstrate the importance of typefaces and reinforce the idea that they are not just plain words - that each typeface has their own personalities and we subconsciously make judgements based on its design. Given the inherent ability of typefaces to influence choices, our research project seeks to confirm the influence of typefaces on choices, as well as the effectiveness of salient forcing using typefaces as a medium to manipulate choices.

Our research project was heavily inspired by Sarah Hyndman, a graphic designer who is known for her interest in psychology behind typography. She is the author of "Why Fonts Matter" and the founder of "Type Tasting" (<http://typetasting.com/>), an experimental type studio, which serves as a platform for her to conduct online surveys and experiments. We adopted one of Hyndman's experiments, namely "Type Dating Game" (refer to Appendix A1). In Hyndman's "Type Dating Game" experiment, participants were tasked to choose a typeface which best

1. Self Represented Typeface (SRT)

- The typeface that participants chose to represent themselves in the survey.

2. Fake Favourite Typeface (FFT)

- The experimentally suggested typeface that was presented to participants in the experimental group as their Real Favourite Typeface.
- Note that participants in the control group do not have a Fake Favourite Typeface.

3. Real Favourite Typeface (RFT)

- The typeface that participants most preferred out of 9 typefaces in the survey.
- Note that participants in the experimental group were not presented with their Real Favourite Typeface. This information was, however, collected from the survey that was done.

4. Token Pick Typeface (TPT)

- The typeface on the mini snack hamper that was eventually chosen by the participants in both control group and experimental group.

## 5. EXPERIMENT DESIGN

The experiment was conducted in two phases. Phase 1 involved an online survey (*refer to Appendix B1*) while Phase 2 involved a quick observational study of the participant. The online survey was designed to be similar to the “Type Dating Game” by Sarah Hyndman (2016). The context of a “speed dating” theme was preserved. However, instead of selecting which typeface participants would date, friend or ditch, they were tasked to rank the typefaces based on how much they find it appealing. Participants were advised not to give the same rank to different typefaces in the same trial. Giving 3 hearts means rating the typeface with the highest rank (most appealing) in a trial while giving 1 heart means the lowest rank (least appealing). This was to ensure that the typefaces were ranked appropriately (*refer to Appendix B2*).

This ensured that the content was hidden from the participant. Attached on the packaging of the tokens of appreciation was a printed sticker with the words “Thank You” printed on it. “Thank You” was printed in different typefaces, which appeared in Phase 1. Different tokens of appreciation have different typefaces stickers attached on it. Based on the results of Phase 1, participants were offered three tokens with three different typefaces printed on them. For the experimental group, these three typefaces corresponded to namely:

1. Fake Favourite Typeface (FFT)
2. Real Favourite Typeface (RFT)
3. A random typeface that was neither their Fake Favourite Typeface nor their Real Favourite Typeface.

For the control group, these three typefaces corresponded to the three highest ranked typeface from the three trials, of which one was their Real Favourite Typeface. All of the participants’ choices were recorded (*refer to Appendix E2*). This concluded Phase 2.

## 5.1 PARTICIPANTS

A total sample of 50 university undergraduates from SUTD (mean age: 22.46, age range: 19-26; 23 females, 27 males) was obtained via convenience sampling to participate in this experiment. Participants were assigned to either the Control Group or Experimental Group based on the day they participated in our experiment for logistical reasons. The experiment was conducted in two separate days. Participants who participated during the first day were assigned to the Control Group while participants who participated during the second day were assigned to the Experimental Group.

## 5.2 MATERIALS

The following materials were used during our experimentation phase. A briefing script was crafted for experimenters to memorize (*refer to Appendix C1*). This was relayed to the

*For participants in the Experimental Group:* Experimenter would check for the participant's Fake Favourite Typeface (FFT) and Real Favourite Typeface (RFT) from the survey results unknown to the participants.

*hmm... make a  
fake favourite typeface?*

Phase 2 of experiment began once the participants finished the survey. Experimenter thanked the participants for their participation while offering them three tokens of appreciation, each with the three different typefaces printed on the packaging, which was related to the participants' results (*refer to Appendix D1*). The tokens of appreciation were mini snack hampers, which were packed in identical brown envelopes (same size, shape and colour), except for the stickers with varied typefaces. Since the packaging concealed the content of the mini snack hamper, participants were tasked to make a choice on which of the hamper he wish to take. Participant's choice based on the typefaces printed on the packaging was recorded. This marked the end of the experiment. The experiment was repeated for the next participant who wished to participate. The whole experiment took an average of 10 minutes to complete per participant.

## **6. RESULTS**

### **6.1 Methodology**

As participants were separated into Control Group and Experimental Group, we categorised their results individually. For the Control Group, participants were categorised according to TPT, which was dependent on their RFT at the end of the survey. If TPT is the same as RFT, the participants would be classified together. Else, if TPT and RFT do not match, these participants would be classified into another group. For the experimental group, the participants were categorised into 3 separate groups as they were exposed to salient forcing. Participants were separated into those whose TPT matched RFT, FFT and the last remaining random font.

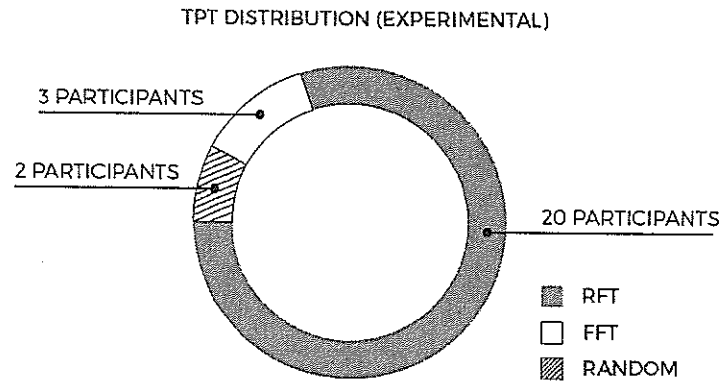


Figure 2: Graphical visualization of the number of participants choosing a particular typeface for the experimental group

Again, a t-test was conducted using SPSS to see if there was any significant difference between the selections of the typeface of the TPT by the participants in the experimental group. From the results (Table 1 in Appendix F), under the experimental group,  $t(24) = 9.798$  and  $p = 0.000$   <sup>$p < .001$</sup>   $\leq .25$ . From the results, there is indeed a significant difference between in the selections. However, it can be observed that the majority of the participants chose their RFT instead of the FFT as their TPT. From Figure 2, 20 out of 25 participants (80%) chose RFT as their TPT and only 3 out of 25 participants (12%) chose FFT as their TPT. This goes against our hypothesis as we expected more participants to choose the FFT instead of RFT as their TPT. Hence, we can conclude that salient forcing had no significant effect and failed to prove our hypothesis.

This result actually serves to further strengthen our first hypothesis.

*Actually you can combine the 2 groups & run ANOVA*

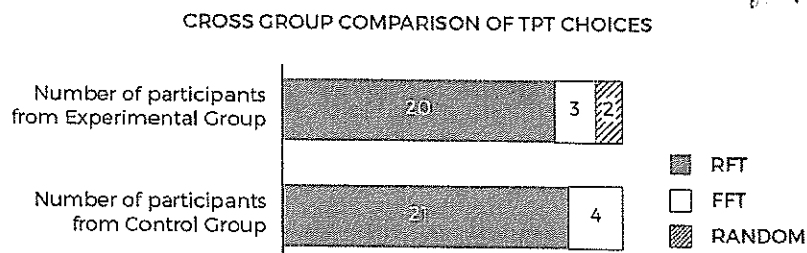


Figure 3: Graphical visualisation of whether there is a match between TPT and RFT typeface for control and experimental group.

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.918 <sup>a</sup>	1	.166		
Continuity Correction <sup>b</sup>	.553	1	.457		
Likelihood Ratio	2.904	1	.088		
Fisher's Exact Test				.280	.243
N of Valid Cases	25				

Table 2: Chi Square Test of Independence to analyse if a participant's concentration level and whether they were affected by the salient forcing is independent

## Other analysis 6.4 Interesting Results

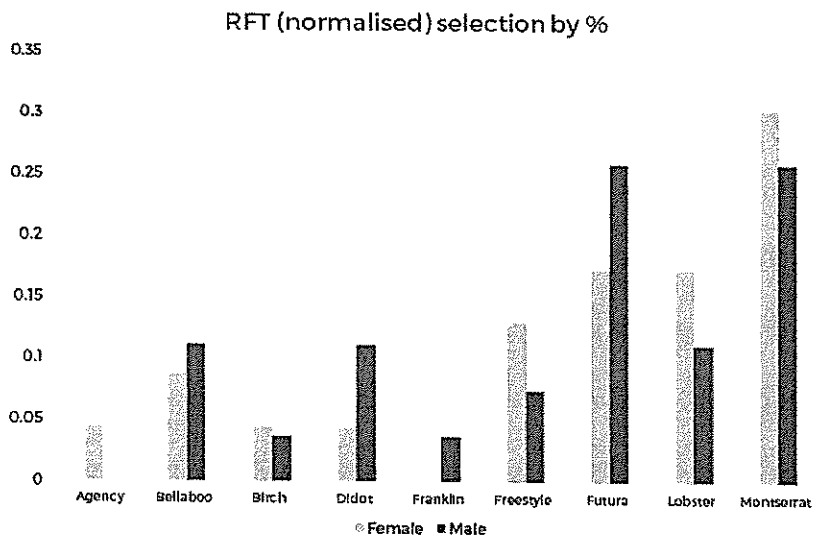


Figure 4: Graphical visualisation of the normalised RFT selection as the TPT of the two genders by percentage

From Figure 4, it can be observed that females preferred "Montserrat Typeface" while males evidently prefer "Futura Typeface" to other typefaces. This is indicative of a plausible role of gender in affecting RFT, and hence TPT selection. The one sample t-test is conducted to test this interesting observation. From Table 3, the  $t(8) = 3.801$ ,  $p = 0.005 < 0.05$  (level of significance for this two tailed test). The results of the p value achieved could be a motivation in warranting further studies to understand the possible effects the role of gender has in font selection. A new study could be designed to specifically test out the hypothesis if there was a difference in RFT between genders.

Is there gender difference in RFT in your study?

## 6.2 Gender Differences

As previously mentioned, one of the interesting results was how there was a clear difference between the RFT between genders. Interestingly, these results were also observed in Hyndman's experiment where the results from her suggested that females have a greater preference for "Franklin Typeface" and males have a greater preference for "Didot Typeface". Hyndman's experiment included a section where participants were tasked to give reasons on why they found their selected typeface dateable. It was found that females tend to choose typefaces which they associated to having masculine properties like "bold" and "strong, yet not too serious." Gender differences in choices is an issue to be mindful about for future studies which conduct experiments with choice making elements.

## 6.3 Limitations, Potential Extensions & Future Applications

It must be acknowledged that there are many forms of salient forcing and that only one form of salient forcing, in the form of an uncontrolled long exposure, was used in our experiment. It would be inappropriate to generalize and conclude that salient forcing has no effects on manipulation of choices simply from our experiment itself. However, this fact itself provides a huge potential for further studies to be conducted solely on experimenting using different forms of salient forcing. For instance, perhaps the time of exposure could be a key factor in influencing participants' choice. A new experiment could be designed such that participants would be flashed with different typefaces in varying time intervals before rating and choosing the typeface which they find most appealing. This is in contrast to not controlling the amount of time given to participants in rating and choosing which possibly incited System 2 thinking. The results from our experiment strongly suggest that people indeed have preferred typefaces, which they found appealing. Furthermore, these preferences were well retained to the point of



## 8. REFERENCES

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### 9.3 APPENDIX C (MATERIALS)

#### C1 Briefing Script:

*"Hello! Do you have 10 minutes to spare? We are a group of students from 02.218: Introduction to Psychology and we are conducting an experiment related to fonts. All you have to do is fill out a quick survey and you will get a free snack hamper at the end! Would you like to participate?"*

*"Great! Let's start. Fill up your details and follow the instructions carefully. Feel free to ask me any questions to clear any doubts."*

#### C2 Debrief Email

**Title:** Psychology Research Participation for 02.218 Introduction to Psychology Course

**Content:** Dear SUTD Students!

We hope this email finds you well!

Our team would like to formally thank you for your participation in our research project for 02.218 Introduction to Psychology course during Week 11. We would like to close off by informing you the purpose of our research project.

Our research project sought to investigate if participants exhibit a skewed preference for a certain typeface, which they found appealing, and whether the implemented salient forcing would change their preferences.

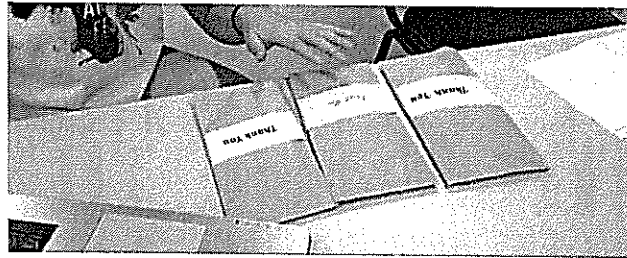
You have contributed to the achievement of a better understanding on the ease of manipulating choices using typefaces and salient forcing. It is important to point out that we do not evaluate individual participant's performance. Rather, we are interested in participants as a group. Only the principal investigator and members of the research team have your identifiable information (e.g. names) and this will not be released to any other person. Identifiable information will never be used in a publication or presentation. All your identifiable health information and research data will be coded (i.e. only identified with a code number) at the earliest possible stage or research.

If you have any questions or problems, please contact Ho Kuan Yu at telephone 9011 6152 or email [kuanyu\\_ho@mymail.sutd.edu.sg](mailto:kuanyu_ho@mymail.sutd.edu.sg) for further clarifications.

Thank you and have a nice day!

### 9.4 APPENDIX D (VISUAL REPRESENTATION OF EXPERIMENTAL SETUP)

#### D1 Figure of participant choosing one out of three tokens offered



#### D2 Figure of experimental setup (laptop and chair in the room)

