INSTITUTION NAME

DOCTORAL THESIS

My awesome thesis

Candidate: John Doe

Advisor: Dr. Fox Dr. Aardvark

A thesis submitted in fulfillment of the requirements for the degree of Doctor of Philosophy

> Phil-3005 Department of Philosophy

> > March 17, 2018

Abstract

Coming back to the use of typefaces in electronic publishing: many of the new typographers receive their knowledge and information about the rules of typography from books, from computer magazines or the instruction manuals which they get with the purchase of a PC or software. There is not so much basic instruction, as of now, as there was in the old days, showing the differences between good and bad typographic design. Many people are just fascinated by their PC's tricks, and think that a widely–praised program, called up on the screen, will make everything automatic from now on.

Keywords: Keywords here or empty ({}) to not display this field

Declaration of Authorship

I, JOHN DOE, declare that this thesis, titled "My awesome thesis", and the work presented in it, is my own. I confirm that:

- This work was done wholly or mainly while in candidature for a research degree at INSTITUTION NAME.
- Where any part of this thesis has previously been submitted for a degree or any other qualification at this or any other research institution, this has been clearly stated.
- Where I have consulted the published work of others, this is always clearly attributed.
- Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work.
- I have acknowledged all main sources of help.
- Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself.

Signed :					
- .					
Date :					

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Preface

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Introduction

Imagine trying to live in a world dominated by dihydrogen oxide, a compound that has no taste or smell and is so viable in its properties that it is generally benign but at other times swiftly lethal. Depending on its state, it can scald you or freeze you. In the presence of certain organic molecules it can form carbonic acids so nasty that they can strip the leaves from trees and eat the faces off statuary. In bulk, when agitated, it can strike with a fury that no human edifice could withstand. Even for those who have learned to live with it, it is often murderous substance. We call it water.

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Theory

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close to my deepest interests in artificial intelligence and esthetic theory, I felt compelled to make some comments to clarify certain important issues raised by "The Concept of a Meta-Font". (Merton, 1979)

1.2 Theoretical framework

Coming back to the use of typefaces in electronic publishing: many of the new typographers receive their knowledge and information about the rules of typography from books, from computer magazines or the instruction manuals which they get with the purchase of a PC or software. There is not so much basic instruction, as of now, as there was in the old days, showing the differences between good and bad typographic design. Many people are just fascinated by their PC's tricks, and think that a widely–praised program, called up on the screen, will make everything automatic from now on.

1.2.1 Concepts

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1.2.2 Famous theory A

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1.2.3 Famous theory B

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1.3 Research question

Coming back to the use of typefaces in electronic publishing: many of the new typographers receive their knowledge and information about the rules of typography from books, from computer magazines or the instruction manuals which they get with the purchase of a PC or software. There is not so much basic instruction, as of now, as there was in the old days, showing the differences between good and bad typographic design. Many people are just fascinated by their PC's tricks, and think that a widely–praised program, called up on the screen, will make everything automatic from now on.

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	P	W	D	L	GD	PST
Paris Saint-Germain	6	5	0	1	21	15
FC Bayern München	6	5	0	1	7	15
Celtic FC	6	1	0	5	-13	3
RSC Anderlecht	6	1	0	5	-15	3

Table 1.1 Group B Champions League 2018

was in the old days, showing the differences between good and bad typographic design. Many people are just fascinated by their PC's tricks, and think that a widely–praised program, called up on the screen, will make everything automatic from now on. Bensaou and Venkatraman (1995)

Theory Theory

Question 1. What is the airspeed velocity of an unladen swallow?

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But a system cannot be successful if it is too strongly influenced by a single person. Once the initial design is complete and fairly robust, the real test begins as people with many different viewpoints undertake their own experiments. Negandhi and Reimann (1973)

Research design

Imagine trying to live in a world dominated by dihydrogen oxide, a compound that has no taste or smell and is so viable in its properties that it is generally benign but at other times swiftly lethal. Depending on its state, it can scald you or freeze you. In the presence of certain organic molecules it can form carbonic acids so nasty that they can strip the leaves from trees and eat the faces off statuary. In bulk, when agitated, it can strike with a fury that no human edifice could withstand. Even for those who have learned to live with it, it is often murderous substance. We call it water.

2.1 Quantitative methodology

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But a system cannot be successful if it is too strongly influenced by a single person. Once the initial design is complete and fairly robust, the real test begins as people with many different viewpoints undertake their own experiments. (Weber, 1978)

Observations

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Figure 3.1 TeX lion

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Discussion

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```
1 # Source: https://ruby-doc.org/core-2.5.0/Object.html
 2 module Enumerable
    # a generic method to repeat the values of any enumerable
    def repeat(n)
 5
    raise ArgumentError, "#{n} is negative!" if n < 0</pre>
      unless block given?
 7
        return to_enum(__method__, n) do # __method__ is :repeat here
 8
           sz = size # Call size and multiply by n...
 9
           sz * n if sz # but return nil if size itself is nil
10
        end
11
      end
12
       each do |*val|
13
        n.times { yield *val }
14
       end
15
   end
16 end
17
18 %i[hello world].repeat(2) { |w| puts w }
19 # => Prints 'hello', 'hello', 'world', 'world'
```

Listing 4.1 Repeat values of enumerables in Ruby

34 Discussion

Coming back to the use of typefaces in electronic publishing: many of the new typographers receive their knowledge and information about the rules of typography from books, from computer magazines or the instruction manuals which they get with the purchase of a PC or software. There is not so much basic instruction, as of now, as there was in the old days, showing the differences between good and bad typographic design. Many people are just fascinated by their PC's tricks, and think that a widely–praised program, called up on the screen, will make everything automatic from now on.

Listing 4.2 Quicksort in Common Lisp

Chapter 5

Conclusions

Appendix A

Interview questions

Appendix B

Surveys

Appendix C

Correspondence

Glossary

Banana a yellow fruit
Recursion see recursion

Abbreviations

EU European Union

NATO North Atlantic Treaty Organization

References

- [1] M. Bensaou and N. Venkatraman, Configurations of Interorganizational Relationships: A Comparison between U.S. and Japanese Automakers, *Management Science* **41** 1471-1492 (1995).
- [2] Rensis Likert, Opinion Studies and Government Policy, *Proceedings of the American Philosophical Society* **92** 341-350 (1948).
- [3] Robert K. Merton, *The Sociology of Science: Theoretical and Empirical Investigations*, p. 605 (University Of Chicago Press, 1979).
- [4] Anant R. Negandhi and Bernard C. Reimann, Correlates of Decentralization: Closed and Open Systems Perspectives, *The Academy of Management Journal* **16** 570-582 (1973).
- [5] Herbert A. Simon, *Administrative Behavior*, 4th Edition, p.. 384 (Free Press, 1997).
- [6] Max Weber, Economy and Society: An Outline of Interpretive Sociology (2 volume set), p.. 1469 (University of California Press, 1978).
- [7] Max Weber and A. M. Henderson, *The Theory of Social and Economic Organization*, p.. 450 (Martino Fine Books, 2012).

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This thesis has been created using the Context MKIV (luatex 1.05) typesetting software. The body text of the document is typeset in the *Gentium* typeface in size 12.0pt, with distance between text lines set to 15.25783pt, and the print and papersize settings of the thesis corresponds to measurement values of the *letter* standard in the *American* print standard series.

The layout of the document has these parameters: width is 15.4213cm, height is 23.5185cm, backspace is 2.5703cm, topspace is 2.3516cm, header is 1.8814cm, footer is 1.8814cm, and the location parameter is doublesided.

