Stress and Travel

Stress and Travel

By Niloofar Nalaee B.Sc.

A Thesis Submitted to the School of Graduate Studies in the Partial Fulfillment of the Requirements for the Degree M.Sc.

You may hate gravity, but gravity does not care

—Albert Einstein

I wish to dedicate this to my awesome brother.

McMaster University
M.Sc. (2023)
Hamilton, Ontario (School of Earth, Environment and Society)

TITLE: Stress and Travel
AUTHOR: Niloofar Nalaee (McMaster University)
SUPERVISOR: Antonio Paez
NUMBER OF PAGES: ix, 8

Lay Abstract

The lay abstract must be 150 words or less.

It must explain the key goals and contributions of the thesis in lay terms that are accessible to the general public.

Abstract

This is the abstract.

I can write a really long abstract.

Acknowledgements

I want to thank a few people.

This includes my friends.

Contents

List of Figures

List of Tables

Declaration of Authorship

I, Niloofar Nalaee, declare that this thesis titled, *Stress and Travel* and the work presented in it are my own. I confirm that:

I did most of the research.

Also the writting.

Sometimes I cried.

But mostly I had fun.

Preface

Welcome to the *R Markdown* thesis template. This template is based on (and in many places copied directly from) the Reed College LaTeX template, but hopefully it will provide a nicer interface for those that have never used TeX or LaTeX before. Using *R Markdown* will also allow you to easily keep track of your analyses in **R** chunks of code, with the resulting plots and output included as well. The hope is this *R Markdown* template gets you in the habit of doing reproducible research, which benefits you long-term as a researcher, but also will greatly help anyone that is trying to reproduce or build onto your results down the road.

Hopefully, you won't have much of a learning period to go through and you will reap the benefits of a nicely formatted thesis. The use of LaTeX in combination with *Markdown* is more consistent than the output of a word processor, much less prone to corruption or crashing, and the resulting file is smaller than a Word file. While you may have never had problems using Word in the past, your thesis is likely going to be about twice as large and complex as anything you've written before, taxing Word's capabilities. After working with *Markdown* and **R** together for a few weeks, we are confident this will be your reporting style of choice going forward.

Why use it?

R Markdown creates a simple and straightforward way to interface with the beauty of LaTeX. Packages have been written in **R** to work directly with LaTeX to produce nicely formatting tables and paragraphs. In addition to creating a user friendly interface to LaTeX, *R Markdown* also allows you to read in your data, to analyze it and to visualize it using **R** functions, and also to provide the documentation and commentary on the results of your project. Further, it allows for **R** results to be passed inline to the commentary of your results. You'll see more on this later.

Who should use it?

Anyone who needs to use data analysis, math, tables, a lot of figures, complex cross-references, or who just cares about the final appearance of their document should use *R Markdown*. Of particular use should be anyone in the sciences, but the user-friendly nature of *Markdown* and its ability to keep track of and easily include figures, automatically generate a table of contents, index, references, table of figures, etc. should make it of great benefit to nearly anyone writing a thesis project.

For additional help with bookdown

Please visit the free online bookdown reference guide.

Chapter 1

Abstract

Large-scale travel surveys are invaluable sources of information to understand travel behavior and other aspects of the urban experience, such as residential context. By their nature, they often shy away from overloading respondents with additional questions. The data presented in this article result from an effort to purposefully collect data on various aspects of the experience of living and moving in a major city in the Global South. The data set contains essential socio-economic and demographic information about the respondents, as well as their built environment and behaviors commuting to work. In addition, the survey (conducted between DATE-DATE, 2016) includes information about the respondents' feelings and emotions in relation to their commuting experience, the social experience of a variety of transportation modes, various self-assessed health questions, patterns of use of information and telecommunication technologies, and questions about sustainability and the environment. The survey was adopted a quota-sampling method that used the Pre-Census of 2012 as a frame, and in total includes 451 validated questionnaires.

1.1 Key words

- Transportation
- Commuting to work
- Built environment
- Well-being
- Equity
- Santiago
- Chile

1.2 Specifications Table

See (**tbl-specifications?**) for details of the data set.

Table 1.1: Specifications table {#tbl-specifications}

Items	Explanation
Subject area	Transportation, Geography, Public Health and Health Policy, Urban development
More specific subject area	Transport inequalities, Stress and limited horizons, Travel behavior, Global South
Type of data	`R` Data Package
How data was acquired	The survey was conducted using a (pen-and-paper??) questionnaire. The instrument contains some quantitative variables regarding the individual characteristics of respondents and mostly 5-point Likert scale responses in the rest of the questionnaire
Data format	Thematic tables and documentation in native `R` format. The thematic tables can be linked by means of a common `ID` field
Parameters for data collection	The survey was collected using a quota-sampling method based on the information from Pre-Census of 2012, and in total, 451 persons validly completed the survey and face-to-face in Santiago, Chile in 2016. The survey collected information on a wide range of travel-related issues (socio-demographics, health-related, perceptions and travel behavior, travel choices and planning, social interaction factors, built environment, among others)
Description of data collection	Data was acquired through the 5-Likert scale questionnaire regarding most sections of the questionnaire, using a face-to-face and quota-sampling method for individual characteristics

M.Sc.– Niloofar Nalaee; McMaster University– School of Earth, Environment and Society

Items	Explanation
Data source location	Santiago, Chile
Data accessibility	https://paezha.github.io/bSantiago/

Chapter 2

Mathematics and Science

2.1 Math

TEX is the best way to typeset mathematics. Donald Knuth designed TEX when he got frustrated at how long it was taking the typesetters to finish his book, which contained a lot of mathematics. One nice feature of *R Markdown* is its ability to read LaTeX code directly.

If you are doing a thesis that will involve lots of math, you will want to read the following section which has been commented out. If you're not going to use math, skip over or delete this next commented section.

$$\sum_{j=1}^{n}(\delta\theta_j)^2 \leq \frac{\beta_i^2}{\delta_i^2+\rho_i^2}\left[2\rho_i^2+\frac{\delta_i^2\beta_i^2}{\delta_i^2+\rho_i^2}\right] \equiv \omega_i^2$$

From Informational Dynamics, we have the following (Dave Braden):

2.2 Physics

Many of the symbols you will need can be found on the math page https://web.reed.edu/cis/help/latex/math.html and the Comprehensive LaTeX Symbol Guide (https://mirror.utexas.edu/ctan/info/symbols/comprehensive/symbols-letter.pdf).

2.3 Biology

You will probably find the resources at https://www.lecb.ncifcrf.gov/~toms/latex.html helpful, particularly the links to bsts for various journals. You may also be interested in TeXShade for nucleotide typesetting (https://homepages.uni-tuebingen.de/beitz/txe.html). Be sure to read the proceeding chapter on graphics and tables.

Conclusion

If we don't want Conclusion to have a chapter number next to it, we can add the `{-}` attribute.

More info

And here's some other random info: the first paragraph after a chapter title or section head *shouldn't be* indented, because indents are to tell the reader that you're starting a new paragraph. Since that's obvious after a chapter or section title, proper typesetting doesn't add an indent there.

References

Angel, E. (2000). *Interactive computer graphics : A top-down approach with OpenGL*. Boston, MA: Addison Wesley Longman.

Angel, E. (2001a). *Batch-file computer graphics : A bottom-up approach with QuickTime*. Boston, MA: Wesley Addison Longman.

Angel, E. (2001b). *Test second book by angel*. Boston, MA: Wesley Addison Longman.