This is the title of a thesis submitted to Iowa State University

Note that only the first letter of the first word and proper names are capitalized

by

Wilbur Terrance Johnson

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Human Development and Family Studies (Marriage and Family Therapy)

Program of Study Committee:
Susan D. Ross, Major Professor
Mary Jones
Bjork Petersen

The student author, whose presentation of the scholarship herein was approved by the program of study committee, is solely responsible for the content of this dissertation/thesis. The Graduate College will ensure this dissertation/thesis is globally accessible and will not permit alterations after a degree is conferred.

Iowa State University
Ames, Iowa
2020

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DEDICATION

I would like to dedicate this thesis to my wife Glenda and to my daughter Alice without whose support I would not have been able to complete this work.
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The nomenclature for your dissertation or thesis is optional. This list may be placed in the following places: as the last preliminary page, before the Reference section, or as an Appendix. The heading is bold if other major headings are bold, and the list is in the same font size and style as text. Nomenclature should follow a two-column format with the term in the left column and its definition or description within the right column.

### Number Sets

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<td>Complex Numbers</td>
</tr>
<tr>
<td>( \mathbb{H} )</td>
<td>Quaternions</td>
</tr>
<tr>
<td>( \mathbb{R} )</td>
<td>Real Numbers</td>
</tr>
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### Other Symbols

<table>
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<tr>
<th>Symbol</th>
<th>Description</th>
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<tbody>
<tr>
<td>( \rho )</td>
<td>Friction Index</td>
</tr>
<tr>
<td>( V )</td>
<td>Constant Volume</td>
</tr>
</tbody>
</table>

### Physics Constants

<table>
<thead>
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<th>Symbol</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>( c )</td>
<td>Speed of light in a vacuum inertial system</td>
</tr>
<tr>
<td>( g )</td>
<td>Gravitational Constant</td>
</tr>
<tr>
<td>( h )</td>
<td>Plank Constant</td>
</tr>
</tbody>
</table>
I would like to take this opportunity to express my thanks to those who helped me with various aspects of conducting research and the writing of this thesis. First and foremost, Dr. Susan D. Ross for her guidance, patience and support throughout this research and the writing of this thesis. Her insights and words of encouragement have often inspired me and renewed my hopes for completing my graduate education. I would also like to thank my committee members for their efforts and contributions to this work: Dr. August Tanner and Dr. Lewis Hargrave. I would additionally like to thank Dr. Tanner for his guidance throughout the initial stages of my graduate career and Dr. Hargrave for his inspirational teaching style.
This is the text of my abstract that is part of the thesis itself. The abstract describes the work in general and the heading and style match the rest of the document.
CHAPTER 1. GENERAL INTRODUCTION

This chapter will have the introduction to your thesis as a whole.

This is the opening paragraph to my thesis which explains in general terms the concepts and hypothesis which will be used in my thesis.

With more general information given here than really necessary.

1.1 Overview

Here initial concepts and conditions are explained and several hypothesis are mentioned in brief.

1.1.1 Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

1.1.1.1 Parts of the hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

1.1.2 Second Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.
1.1.2.1 Parts of the second hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny Allen (1984), Bruner (1960), de la Vallée Poussin (1900) abcd.

1.2 Criteria Review

Here certain criteria are explained thus eventually leading to a foregone conclusion.

1.3 References


de la Vallée Poussin, C. L. X. J. (1900). A strong form of the prime number theorem, 19th century.
CHAPTER 2. PAPER 1 TITLE GOES HERE

Authors and Affiliations
Modified from a manuscript to be submitted to/ under review/ published in Name of the Journal

2.1 Abstract
This is the text of my abstract that is part of the thesis itself. The abstract describes the work in the first paper general. You can use the same abstract as your paper here.

2.2 Overview
The construct of this section or any further section is same as the authors paper. This is the opening paragraph to my thesis which explains in general terms the concepts and hypothesis which will be used in my thesis.
With more general information given here than really necessary.

2.3 Introduction
Here initial concepts and conditions are explained and several hypothesis are mentioned in brief. Allen (1984), Bruner (1960) and Cox (1974) did the initial work in this area. But in Struss' work [Struss (1996)] the definitive model is seen.

2.3.1 Hypothesis
Here one particular hypothesis is explained in depth and is examined in the light of current literature.
2.3.1.1 Parts of the hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

2.3.2 Second Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

2.3.2.1 Parts of the second hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

2.4 Criteria Review

Here certain criteria are explained thus eventually leading to a foregone conclusion.

2.5 Conclusion


2.6 References


### 2.7 Appendix A: Appendix A Title Goes Here After The Colon

If there is an appendix that needs to go with the paper it can be as a section *Aupetit* (1991)

#### 2.7.1 Procedure details

Details of the paper specific appendix procedures

### 2.8 Appendix B: Appendix B Title Goes Here After The Colon

If there is an appendix that needs to go with the paper it can be as a section *Aupetit* (1991)

#### 2.8.1 Procedure details

Details of the paper specific appendix procedures
CHAPTER 3. PAPER 2 TITLE GOES HERE

Authors and Affiliations

Modified from a manuscript to be submitted to/ under review/ published in *Name of the Journal*

3.1 Abstract

This is the text of my abstract that is part of the thesis itself. The abstract describes the work in the first paper general. You can use the same abstract as your paper here.

3.2 Overview

The construct of this section or any further section is same as the authors paper. This is the opening paragraph to my thesis which explains in general terms the concepts and hypothesis which will be used in my thesis.

With more general information given here than really necessary.

3.3 Introduction

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3.3.1 Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.
3.3.1.1 Parts of the hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

3.3.2 Second Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

3.3.2.1 Parts of the second hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

3.4 Criteria Review

Here certain criteria are explained thus eventually leading to a foregone conclusion.

3.5 Conclusion

The conclusion of the paper goes here.


3.6 References


### 3.7 Appendix: Appendix Title Goes Here

If there is an appendix that needs to go with the paper it can be as a section Aupetit (1991)

#### 3.7.1 Procedure details

Details of the paper specific appendix procedures
CHAPTER 4. PAPER 3 TITLE GOES HERE

Authors and Affiliations
Modified from a manuscript to be submitted to/ under review/ published in *Name of the Journal*

4.1 Abstract
This is the text of my abstract that is part of the thesis itself. The abstract describes the work in the first paper general. You can use the same abstract as your paper here.

4.2 Methods and procedures
This is the opening paragraph to my thesis which explains in general terms the concepts and hypothesis which will be used in my thesis.
With more general information given here than really necessary.

4.3 Introduction
Here initial concepts and conditions are explained and several hypothesis are mentioned in brief.
As can be seen in Table 4.1 it is truly obvious what I am saying is true.

4.3.1 Hypothesis
Here one particular hypothesis is explained in depth and is examined in the light of current literature.
This can also be seen in Figure 4.1 that the rest is obvious.
Table 4.1 This table shows a standard empty table. In case of long captions, we want to use the long caption as the description to the table and image but not use it in the table of contents and list of figures/tables. In order to do this, there are two captions which have been provided, remove the first square bracket options if there is only one small caption. You can use citations like this too Enflo (1987)

4.3.1.1 Parts of the hypothesis
Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

4.3.2 Second Hypothesis
Here one particular hypothesis is explained in depth and is examined in the light of current literature.
4.3.2.1 Parts of the second hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

4.4 Criteria Review

Here certain criteria are explained thus eventually leading to a foregone conclusion as can be seen in Table 4.2.

Table 4.2 This table shows a standard empty table with a limited caption width

4.5 Results

Include any results

4.6 Conclusion

The conclusion of the paper goes here.


4.7 References


4.8 Appendix: Appendix Title Goes Here

If there is an appendix that needs to go with the paper it can be as a section Aupetit (1991)

4.8.1 Procedure details

Details of the paper specific appendix procedures
CHAPTER 5. PAPER 4 TITLE GOES HERE

Authors and Affiliations

Modified from a manuscript to be submitted to/ under review/ published in Name of the Journal

5.1 Abstract

This is the text of my abstract that is part of the thesis itself. The abstract describes the work in the first paper general. You can use the same abstract as your paper here.

This is the opening paragraph to my thesis which explains in general terms the concepts and hypothesis which will be used in my thesis.

With more general information given here than really necessary.

5.2 Introduction

Here initial concepts and conditions are explained and several hypothesis are mentioned in brief.

Of course, data on this as seen in Table 5.1 is few and far between.

Table 5.1 Moon Data

<table>
<thead>
<tr>
<th>Element</th>
<th>Control</th>
<th>Experimental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moon Rings</td>
<td>1.23</td>
<td>3.38</td>
</tr>
<tr>
<td>Moon Tides</td>
<td>2.26</td>
<td>3.12</td>
</tr>
<tr>
<td>Moon Walk</td>
<td>3.33</td>
<td>9.29</td>
</tr>
</tbody>
</table>

5.2.1 Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

Or graphically as seen in Figure 5.1 it is certain that my hypothesis is true.
5.2.1.1 Parts of the hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

5.2.2 Second Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

5.2.2.1 Parts of the second hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

5.3 Criteria Review

Here certain criteria are explained thus eventually leading to a foregone conclusion.
5.4 Results

5.5 Conclusion

The conclusion of the paper goes here.

5.6 References


5.7 Appendix: Appendix title goes here

If there is an appendix that needs to go with the paper it can be as a section Aupetit (1991)

5.7.1 Procedure details

Details of the paper specific appendix procedures

CHAPTER 6. GENERAL CONCLUSION

This is the opening paragraph to my thesis which explains in general terms the concepts and hypothesis which will be used in my thesis.

With more general information given here than really necessary.

6.1 Summary And Discussion

Here initial concepts and conditions are explained and several hypothesis are mentioned in brief.

6.1.1 Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

As can be seen in Table 6.1 it is truly obvious what I am saying is true.

6.1.1.1 Parts of the hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny. Allen (1984), Bruner (1960), Struss (1996)

6.2 References


Table 6.1  This table shows almost nothing but is a sideways table and takes up a whole page by itself

<table>
<thead>
<tr>
<th>Element</th>
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