A STATISTICAL MODEL OF PERCEPTUAL VARIABILITY AND ITS APPLICATION TO CHOICE DATA

A Dissertation Presented

by

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Submitted to the Graduate School of the University of Massachusetts Amherst in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPY

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Psychological and Brain Sciences

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Psychological and Brain Sciences

DEDICATION

To those little lost sheep.

ACKNOWLEDGMENTS

ABSTRACT

A STATISTICAL MODEL OF PERCEPTUAL VARIABILITY AND ITS APPLICATION TO CHOICE DATA

SEPTEMBER 2025

 ${\bf SEAN\ PATRICK\ CONWAY}$, UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor Andrew L. Cohen

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1.2	A disc in a square
1.3	Two discs in a rectangle
1.4	A circle and a disc in a square. We want this caption to be very long to ensure that the formatting of very long captions is handled correctly. The case of short captions has already been dealt with

INTRODUCTION

Why on earth do I want to study sheep anyway?

CHAPTER 1

AN INTRODUCTION TO SHEEP

Is there life after sheep? [?] Yes, I say there is.

1.1 Pulling the wool over your eyes

Sheep are fabulous creatures. The noises they make are truly stupendous [?]. We also want to refer to figure 1.1 here. Here's some verbatim text to screw us up:

```
xxx := y;
xy := x;
```

1.1.1 All about sheep noises

Lots of text here just to fill up some space so we can be sure that we really are double-spacing and doing all the other things that might be necessary in formatting a dissertation to U.Mass. guidelines. We're also going to have another figure here, figure 1.2, just for fun, and to make sure that the list of figures is formatted correctly. Now it's time for table 1.1. We really are going to need a third figure, figure 1.3, two more tables, table 1.2 and table 1.3 and a fourth figure, figure 1.4, just to really make sure.

Table 1.1. Some numbers.

	Minimum		
Type of Animal	Observed	Observed	Observed
Cats	12	20	24
Dogs	20	20	20

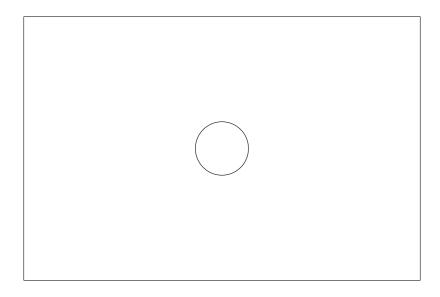


Figure 1.1. A circle in a square.

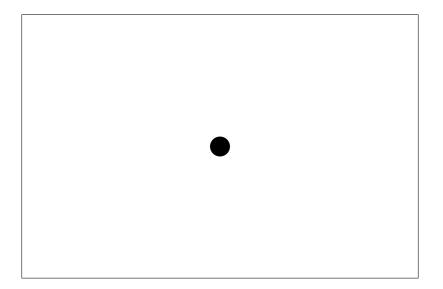


Figure 1.2. A disc in a square.

Table 1.2. More numbers.

Type of Animal	Arms	Legs	Ears
Person	2	2	2
Dog	0	4	2

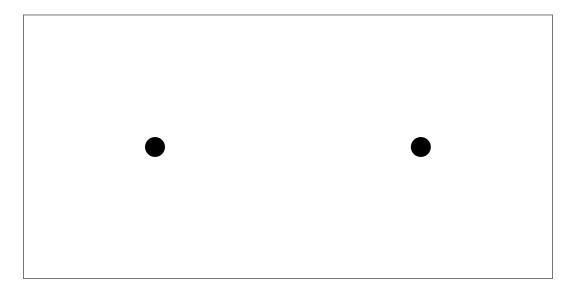


Figure 1.3. Two discs in a rectangle.

Table 1.3. Even more numbers; together with a caption long enough to ensure that multi-line caption formatting works correctly. If you want a shorter caption to appear in the Table of Figures you're going to have to put the shorter caption in the [] as shown in this example.

X	1	1	1
У	2	2	2
\mathbf{Z}	3	3	3

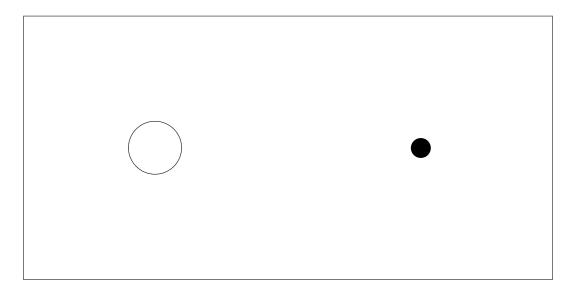


Figure 1.4. A circle and a disc in a square. We want this caption to be very long to ensure that the formatting of very long captions is handled correctly. The case of short captions has already been dealt with.

1.1.1.1 Baahs

- 1.1.2 Even more about sheep noises
- 1.1.3 And yet more about sheep noises

1.2 What about wolves?

What about wolves?¹

1.3 What about shepherds?

What about shepherds? I don't really know, but I want some text here to fill things in so that I can verify that everything is OK.²

 $^{^1\}mathrm{To}$ be fair, some wolves are probably nice. . .

²Some shepherds are good, some are bad. The reader is referred to Mary and The Boy Who Cried Wolf for further insight into this much-debated issue. (This needs to be a very long footnote so we can test the spacing between lines on a footnote.)

1.3.1 A subsection

This is a subsection of the subsection about shepherds.

1.3.2 Another subsection

This is another subsection of that section.

1.3.2.1 A subsubsection

This is a subsubsection of that subsection that will in turn havae a paragraph with a pair of subparagraphs. I am aware that I shouldn't have only one subsubsection in the subsection...

- 1.3.2.1.1 A Paragraph This is the text associated with this paragraph. I really want enough text to make it look like a paragraph. Baah, b
- 1.3.2.1.1.1 A Subparagraph This is the text associated with this subparagraph. Baah, baah,
- 1.3.2.1.1.2 Another Subparagraph Better not have subparagraphs without text in them. Baah, baah,
- 1.3.2.1.2 Another Paragraph Baah, baah, baah. Baah, baah, baah. Baah, baah, baah. Baah, baah, baah. Baah, baah.

Baah, baah,

1.3.2.2 Another Subsubsection

With some text. Baah, ba

CHAPTER 2

SHEEP AND GRASS

2.1 Introduction

Grass is a wonderful food... Baah, baah, baah. Baah, baah, baah. Baah, b

CHAPTER 3

A WONDERFULLY LONG CHAPTER TITLE THAT IS THIS LONG IN ORDER TO TEST THE CHAPTER HEADING STUFF

Note that we shouldn't really have a chapter heading with no body, so here is a body for this chapter. Baah, baah, baah. Baah, baah, baah. Baah, baah,

3.1 The antidisestablishmentarainism supercalifragilisticexpialidocious longlonglonglongword

A quotation:

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut nibh orci, molestie non vehicula ac, ultricies quis purus. Nunc euismod metus vel nulla sodales quis tempus nisi varius. Sed ornare pulvinar bibendum. Ut egestas mollis nisi vel cursus.

...and a quote:

Ut dolor libero, blandit tristique accumsan non, viverra a magna. Sed pretium sollicitudin neque, sit amet ornare lorem convallis ac. Fusce mollis gravida aliquam. Nullam vulputate turpis vitae orci porttitor auctor. Donec in auctor erat.

$\begin{array}{c} \text{APPENDIX A} \\ \text{THE FIRST APPENDIX TITLE} \end{array}$

...

APPENDIX B THE SECOND APPENDIX TITLE

...