DISCOVERING STATISTICS USING IBM SPSS STATISTICS

4TH EDITION

ANDY FIELD

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CONTENTS

PREFACE

Karma Police, arrest this man, he talks in maths, he buzzes like a fridge, he's like a detuned radio

Radiohead, 'Karma Police', *OK Computer* (1997)

Introduction

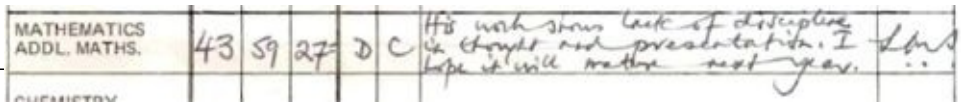
Many behavioural and social science students (and researchers for that matter) despise statistics. Mo of us have a non-mathematical background, which makes understanding complex statistical equatio very difficult. Nevertheless, the evil goat-warriors of Satan force our non-mathematical brains apply themselves to what is the very complex task of becoming a statistics expert. The end result, you might expect, can be quite messy. The one weapon that we have is the computer, which allows u to neatly circumvent the considerable disability of not understanding mathematics. Comput programs such as IBM SPSS Statistics, SAS, R and the like provide an opportunity to teach statisti at a conceptual level without getting too bogged down in equations. The computer to a goat-warrior Satan is like catnip to a cat: it makes them rub their heads along the ground and purr and dribb ceaselessly. The only downside of the computer is that it makes it really easy to make a complete idi of yourself if you don't really understand what you're doing. Using a computer without any statistic knowledge at all can be a dangerous thing. Hence this book.

My first aim is to strike a good balance between theory and practice: I want to use the computer a tool for teaching statistical concepts in the hope that you will gain a better understanding of bo theory and practice. If you want theory and you like equations then there are certainly better book Howell (2012), Stevens (2002) and Tabachnick and Fidell (2012) have taught (and continue to teac me more about statistics than you could possibly imagine. (I have an ambition to be cited in one these books, but I don't think that will ever happen.) However, if you want a stats book that als discusses digital rectal stimulation then you have just spent your money wisely.

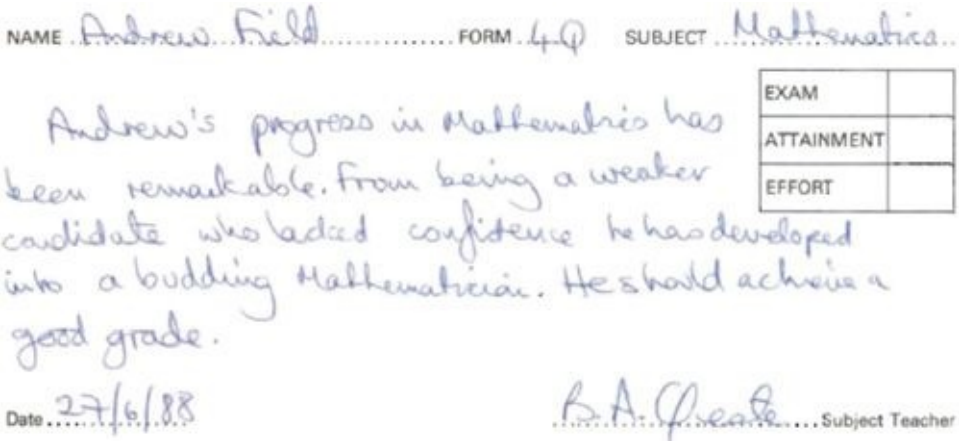
Too many books create the impression that there is a 'right' and 'wrong' way to do statistics. Da analysis is more subjective than is often made out. Therefore, although I make recommendation within the limits imposed by the senseless destruction of rainforests, I hope to give you enoug background in theory to enable you to make your own decisions about how best to conduct yo analysis.

A second (ridiculously ambitious) aim is to make this the only statistics book that you'll ever nee to buy. It's a book that I hope will become your friend from first year at university right through your professorship. The start of the book is aimed at first-year undergraduates (Chapters 1–9), a then we move onto second-year undergraduate level material (Chapters 5, 8 and 10–15) before dramatic climax that should keep postgraduates tickled (Chapters 16–20). There should be somethi for everyone in each chapter also, and to help you gauge the difficulty of material, I flag the level each section within each chapter (more on that in a moment).

My final and most important aim is to make the learning process fun. I have a sticky history wi maths. This extract is from my school report at the age of 11:



The ‘27’ in the report is to say that I came equal 27th with another student out of a class of 29. That pretty much bottom of the class. The 43 is my exam mark as a percentage. Oh dear. Four years lat (at 15) this was my school report:


NAME Andrew Field FORM 4Q SUBJECT Mathematics

EXAM	
ATTAINMENT	
EFFORT	

Andrew's progress in Mathematics has been remarkable. From being a weaker candidate who lacked confidence he has developed into a budding Mathematician. He should achieve a good grade.

Date 27/6/88 B.A. Keate Subject Teacher

The catalyst of this remarkable change was having a good teacher: my brother, Paul. I owe my life a an academic to Paul’s ability to teach me stuff in an engaging way – something my maths teache failed to do. Paul’s a great teacher because he cares about bringing out the best in people, and he wa able to make things interesting and relevant to me. He got the ‘good teaching’ genes in the family, bu wasted them by not becoming a teacher; however, they’re a little less wasted because his approac inspires mine. I strongly believe that people appreciate the human touch, and so I try to inject a lot my own personality and sense of humour (or lack of) into *Discovering Statistics Using* … book Many of the examples in this book, although inspired by some of the craziness that you find in the re world, are designed to reflect topics that play on the minds of the average student (i.e., sex, drug rock and roll, celebrity, people doing crazy stuff). There are also some examples that are there simpl because they made me laugh. So, the examples are light-hearted (some have said ‘smutty’, but I pref ‘light-hearted’) and by the end, for better or worse, I think you will have some idea of what goes on my head on a daily basis. I apologize to those who think it’s crass, hate it, or think that I’ undermining the seriousness of science, but, come on, what’s not funny about a man putting an eel u his anus?

I never believe that I meet my aims, but previous editions have certainly been popular. I enjoy th rare luxury of having complete strangers emailing me to tell me how wonderful I am. (Admittedl there are also emails calling me a pile of gibbon excrement, but you have to take the rough with th smooth.) The second edition of this book also won the British Psychological Society book award 2007. However, with every new edition, I fear that the changes I make will ruin all of my previou hard work. Let’s see what those changes are.

What do you get for your money?

This book takes you on a journey (and I try my best to make it a pleasant one) not just of statistics b also of the weird and wonderful contents of the world and my brain. It’s full of daft, bad jokes, ar smut. Aside from the smut, I have been forced reluctantly to include some academic content.