Thiele: Pioneer in Statistics
Steffen L. Lauritzen

Thorvald Nicolai Thiele was a brilliant Danish researcher of the 19th century. He was a professor of Astronomy at the University of Copenhagen and the founder of Hafnia, the first Danish private insurance company. Thiele worked in astronomy, mathematics, actuarial science, and statistics, his most spectacular contributions were in the latter two areas, where his published work was far ahead of his time. This book is concerned with his statistical work. It evolves around his three main statistical masterpieces, which are now translated into English for the first time: 1) his article from 1880 where he derives the Kalman filter; 2) his book from 1889, where he lays out the subject of statistics in a highly original way, derives the half-invariants (today known as cumulants), the notion of likelihood in the case of binomial experiments, the canonical form of the linear normal model, and develops model criticism via analysis of residuals; and 3) an article from 1899 where he completes the theory of the half-invariants. This book also contains three chapters, written by A. Hald and S. L. Lauritzen, which describe Thiele's statistical work in modern terms and puts it into an historical perspective.

Prologue
David F. Armstrong and Sherman E. Wilcox

This prologue begins with a description of an old thought experiment. The experiment imagines a situation where twenty-four human infants, twelve males and twelve females, are raised in a setting without any face-to-face interaction with or communication from anyone other
than their own experimental peers. It is argued that the children's initial attempts to communicate would involve pointing to and touching or otherwise manipulating the other children and objects in their environment. This claim is reinforced by the experience of people who have tried to communicate with people whose language they don't know. In such circumstances, people often resort to pointing and pantomime to communicate. However, deaf people who encounter other deaf people from foreign countries are able to negotiate a visual code that results in basic communication. This is interesting since the signed languages of the deaf are quite diverse and not mutually comprehensible, and just as complex grammatically as spoken languages.

Storable Votes
Alessandra Casella

Storable Votes are a simple voting scheme that allows the minority to win occasionally, while treating every voter equally. Because the minority wins when it cares strongly about a decision while the majority does not, minority victories occur with little cost, in fact typically with gains, for the community as a whole. The idea is simple: Consider a group of voters faced with a series of proposals, each of which can either pass or fail. Decisions are taken according to the majority of votes cast, but each voter is endowed with a budget of votes to distribute freely over the multiple decisions. Because voters cast more votes on decisions that matter to them more, they reveal the intensity of their preferences and increase their probability of winning exactly when it matters to them most. Thus Storable Votes elicit and reward voters’ intensity of preferences without the need for any external knowledge of voters’ preferences. By treating everyone equally and ruling out interpersonal vote trades, they are in line with common ethical priors and are robust to criticisms, both normative and positive, that affect vote markets. The book complements the theoretical discussion with several experiments, showing that the idea is supported by the data: experimental outcomes match the predictions of the theory. Because the intuition behind Storable Votes is so simple—“vote more when you care more”—the results are robust across different scenarios, even when subtle strategic effects are not identified by the subjects, suggesting real potential for practical applications.
Chapter 6 of Part I described a field quasi-experiment—a survey matched to actual observed behavior—run during university student elections at Columbia University. This chapter presents testing of the representatives of the samples and measures of inequality.

**Conclusion**

Adrienne Lehrer

This chapter summarizes the main discussions of the book outlining the topics of the three parts of the books. Part I dealt with wine words and the extensive wine lexicon that has emerged. Part II reported on the experiments conducted which interestingly showed that the nonexpert and even some expert wine drinkers generally did not agree on wine descriptions and often did not form a consensus on wines. Part III dealt with the functions of language and certain aspects of wine culture such as elitism, anti-elitism, and marketing.

**Electrons and Disorder in Solids**

V. F. Gantmakher

This book contains modern concepts about the physics of electrons in solids. It is written using a minimum of mathematics, with the emphasis on various physical models aimed at stimulating creative thinking. The book aims to aid in the choice of the most efficient scheme of an experiment or the optimal algorithm of a calculation. Boltzmann and
hopping types of conductivity are compared. The qualitative theory of weak localization is presented and its links with the true localization and metal-insulator transitions. Processes that determine the structure of impurity bands are revealed. The concepts introduced in this book are applied to descriptions of granular metals and quasicrystals, as well as the integer quantum Hall effect, emphasizing their universality.

It really is true
Louis A. Girifalco

in The Universal Force: Gravity - Creator of Worlds

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Item type: chapter

The results of the special theory of relativity are so peculiar that a huge number of experiments have been done to check its validity. The contraction of space, the slowing down of time, and the equivalence of mass and energy had to be experimentally verified before they could be accepted; and they were. Electron-positron annihilation, accelerator experiments, muon decay measurements, and a host of other experiments were performed. All verified special relativity and none contradicted it.

Conclusion
Nigel Yates

in Buildings, Faith, and Worship

Published in print: 1993 Published Online: September 2011
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Item type: chapter

The desire to rid churches of box pews and appropriated or rented seats had received a strong measure of support in some ecclesiastical circles since at least 1820. The Church of England has recently embarked on a new series of liturgical experiments, far more international in outlook than the thoroughly introspective experiments of the 19th century, which will reject ecclesiology as much as the ecclesiologists rejected the liturgical outlook of their predecessors. It is important that the Church of England should not forget its past liturgical heritage, since it helps to make sense of its contemporary liturgical outlook. This book identifies several stages of liturgical development from the Reformation of the 16th
The claim that contemporary analytic philosophers rely extensively on intuitions as evidence is almost universally accepted in current meta-philosophical debates and it figures prominently in our self-understanding as analytic philosophers. No matter what area you happen to work in and what views you happen to hold in those areas, you are likely to think that philosophizing requires constructing cases and making intuitive judgments about those cases. This assumption also underlines the entire experimental philosophy movement: Only if philosophers rely on intuitions as evidence are data about non-philosophers’ intuitions of any interest to us. Our alleged reliance on the intuitive makes many philosophers who don’t work on meta-philosophy concerned about their own discipline: they are unsure what intuitions are and whether they can carry the evidential weight we allegedly assign to them. The goal of this book is to argue that this concern is unwarranted since the claim is false: it is not true that philosophers rely extensively (or even a little bit) on intuitions as evidence. At worst, analytic philosophers are guilty of engaging in somewhat irresponsible use of ‘intuition’-vocabulary. While this irresponsibility has had little effect on first order philosophy, it has fundamentally misled meta-philosophers: it has encouraged meta-philosophical pseudo-problems and misleading pictures of what philosophy is.

Differing Points of View

Srinivasa Rao

in Advaita: A Contemporary Critique
true. If two points of view are really different from one another, they cannot contradict each other. If we look at a table with naked eyes we see it as solid. If we look at the same table through a powerful electron microscope, we see only minute particles in vast empty spaces. But we cannot say that the solidity of the table is sublated or contradicted by the sub-atomic point of view. This point is also illustrated by a thought-experiment involving a terrestrial observer on earth and an extra-terrestrial observer located in outer space.

What’s Wrong with Their Mice?
Nikolas Rose and Joelle M. Abi-Rached

This chapter discusses the use of animals to explore issues relating to human cognition, emotion, volition, and their pathologies. Researchers who use animal models in their work point to similarities in the genomes of the two species, in the structure of mouse and human brain, in patterns of brain activation, in neural mechanisms at the cellular and molecular level, in responses to drugs and so forth, perhaps with reference to evolution and the principle of conservation across species when it comes to the most basic aspects of living organisms, including their brains. The chapter then examines four interconnected themes: the question of the artificiality of the laboratory situation within which animal experiments are conducted; the idea of a model in behavioral and psychiatric research; the specificity of the human and the elision of history and human sociality; and the problem of translation.

The Rise of New Labour
Anthony F. Heath, Roger M. Jowell, and John K. Curtice

The main aim of the book is to explore electoral behaviour in Britain from 1979–97, which covers the 18 years of Conservative government with Margaret Thatcher and John Major as prime ministers of the country and ends with New Labour's landslide victory in 1997. The authors of The Rise of New Labour describe the electoral experiments in the British political spectrum in this period, assess the reasons for their success and
failure and discuss their implications in the framework of the underlying theories of electoral behaviour. The analyses in the book are based on the series of British Election Surveys (BESs) that have been undertaken immediately after every election since 1964 and on the 1992–97 British Election Panel Study (BEPS).

Galton and the Stirp Theory
P. Kyle Stanford

in Exceeding Our Grasp: Science, History, and the Problem of Unconceived Alternatives

Published in print: 2006 Published Online: May 2006
Item type: chapter

This chapter begins with a discussion of Galton's transfusion experiments and his development of the “stirp” theory of inheritance. It then discusses Galton's understanding of “correlation” and “variable influences” in development. It is argued that just as Darwin failed to conceive of the very possibility of any common-cause mechanism for inheritance, after surmounting this conceptual obstacle Galton failed in turn to conceive of any alternatives to the maturational and invariant aspects of his own account of particulate inheritance.

Introduction
Roy A. Sorensen

in Thought Experiments

Published in print: 1999 Published Online: February 2006
Item type: chapter

This introductory chapter begins with a brief description of the purpose of this book, which is to present a general theory of thought experiments. The discussion includes thought experiments from many disparate fields, ranging from aesthetics to zoology. The primary goal is to establish true and interesting generalizations about them. Success here will radiate to the secondary goal of understanding philosophical thought experiments. An overview of the subsequent chapters is presented.
This chapter discusses an event of which one is the subject. It has three components, three requirements, in the idea of ‘the subject of an event’ here. In the first place, whoever is reported as having or having had the experience is the grammatical subject of the event-report, or can easily be made the grammatical subject and to some extent the test-subject; it seems that the event must not depart too widely from the old, submerged meaning of an experience as an experiment, test, or trial to which something is subjected. The third requirement is one which the chapter states in an ambiguous and potentially misleading, though not unnatural, form as a preliminary to analysing what it involves: the grammatical subject and test-subject of the event must also be the conscious subject, or there must be the right sort of consciousness or awareness.

Toward a High-Employment, High-Equality Society

Lane Kenworthy

This chapter summarizes the book's findings, recommends some strategies for combining low inequality with high employment, and considers some potential objections and alternatives. It argues that there is no silver bullet for a country wishing to be a high-equality, high-employment society. Each country is different in its existing configuration of institutions and policies, and in its citizens' preferences about equality and employment. Thus, there is no one-size-fits-all reform package that will yield optimal results for every nation. Given the considerable uncertainty regarding the best course of action for any particular country, governments and other economic actors have little option but to experiment. Success requires learning from the experiences of other countries, learning from one's own past, and continuous experimentation and adjustment.
Quasi-experimental research designs are the most widely used research approach employed to evaluate the outcomes of social work programs and policies. This new volume describes the logic, design, and conduct of the range of such designs, encompassing pre-experiments, quasi-experiments making use of a control or comparison group, and time-series designs. An introductory chapter describes the valuable role these types of studies have played in social work, going back to the 1930s, and continuing to the present. Subsequent chapters describe the major features of individual quasi-experimental designs, the types of questions they are capable of answering, and their strengths and limitations. Each discussion of these designs presented in the abstract is subsequently illustrated with descriptions of real examples of their use as published in the social work literature and related fields. By linking the discussion of quasi-experimental designs in the abstract to actual applications to evaluate the outcomes of social services, the usefulness and vitality of these research methods comes alive to the reader. While this volume could be used as a research textbook, it will also have great value to practitioners seeking a greater conceptual understanding of the quasi-experimental studies they frequently read about in the social work literature. Human service professionals planning to undertake a program evaluation of their own agency's services will find this book of immense help in understanding the steps and actions needed to adopt a quasi-experimental strategy. It is usually the case that ethical and pragmatic considerations preclude the use of randomly assigning social work clients to experimental and comparative treatment conditions, and in such instances, the practicality of employing a quasi-experimental method becomes an excellent alternative.
This chapter applies alternative research methods to test the effect of direct elections on presidential activism. First, the Slovakian case offers a setting of a natural experiment because it changed its presidential election method from indirect to direct contest in 1998. Contrary to the conventional argument, the change did not induce the expected increase in presidential activism. This chapter also compares three pairs of otherwise similar countries one of which uses direct while the other indirect elections in order to determine whether the former have more active presidents. No such effect is detected. Rather, these comparisons further confirm the theory that political opportunity framework determines levels of presidential activism. Finally, this chapter considers other potential influences on presidents' involvement in politics, such as their personalities, specific historical circumstances, and the country's level of economic and democratic development. These alternative explanations do not find support.

Discrimination
Norma van Surdam Graham

in Visual Pattern Analyzers

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Item type: chapter

This chapter describes identification experiments where an observer is asked to identify which of several nonblank stimuli has been presented. Only identification experiments using stimulus intensities so low that the stimuli themselves are imperfectly discriminable from a blank stimulus are considered, because these near-threshold experiments are particularly suited for studying multiple visual pattern analyzers as discussed in Chapter 1. This chapter presents classification experiments (identification experiments in which there is a one-to-one correspondence between the responses and stimuli) and three different kinds of discrimination experiments (identification with only two stimuli). The appropriate multidimensional signal detection models for interpreting their results are presented as developments of the models in preceding chapters.
This chapter argues that there is a tension in the semantic views held by certain antiphysicalists. These philosophers accept Fregean arguments against direct-reference theories of ordinary proper names but maintain that phenomenal concepts refer directly. Against this semantic package, it is argued that the thought experiments that motivate a sense-reference distinction for ordinary proper names — roughly, Hesperus-Phosphorus stories — can be replicated at the level of direct phenomenal concepts. (A Hesperus-Phosphorus story is one in which one rationally believes both that object a has a property P and that object b lacks P, even though a = b.)