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THE COMPUTATION OF STYLE

AN INTRODUCTION TO STATISTICS FOR STUDENTS OF
LITERATURE AND HUMANITIES

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AN INTRODUCTION TO STATISTICS FOR
STUDENTS OF LITERATURE AND HUMANITIES

by

ANTHONY KENNY

Master of Balliol College, Oxford



PERGAMON PRESS

OXFORD · NEW YORK · TORONTO · SYDNEY · PARIS · FRANKFURT

U.K.	Pergamon Press Ltd., Headington Hill Hall, Oxford OX3 0BW, England
U.S.A.	Pergamon Press Inc., Maxwell House, Fairview Park, Elmsford, New York 10523, U.S.A.
CANADA	Pergamon Press Canada Ltd., Suite 104, 150 Consumers Rd., Willowdale, Ontario M2J 1P9, Canada
AUSTRALIA	Pergamon Press (Aust.) Pty. Ltd., P.O. Box 544, Potts Point, N.S.W. 2011, Australia
FRANCE	Pergamon Press SARL, 24 rue des Ecoles, 75240 Paris, Cedex 05, France
FEDERAL REPUBLIC OF GERMANY	Pergamon Press GmbH, 6242 Kronberg-Taunus, Hammerweg 6, Federal Republic of Germany

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First edition 1982

Library of Congress Cataloguing in Publication Data

Kenny, Anthony John Patrick.

The computation of style.

(Pergamon international library of science, technology, engineering, and social sciences)

1. Literary research—Statistical methods. 2. Statistics. 3. Style, Literary. I. Title. II. Series. PN73.K46
1982 807.2 81-19221 AACR2

British Library Cataloguing in Publication Data

Kenny, Anthony

The computation of style.

1. English literature—Style 2. Electronic digital computers

I. Title

820.9 PR57

ISBN 0-08-024282-0 (Hardcover)

ISBN 0-08-024281-2 (Flexicover)

Printed and bound in Great Britain by A. Wheaton & Co., Exeter

Preface

THIS book is intended as an elementary introduction to statistics for those who wish to make use of statistical techniques in the study of literature. There are many elementary textbooks of statistics on the market, but they are all aimed at students in the natural or social sciences. In general they are unsuitable for scholars in the humanities because they presuppose too great a facility in mathematics and because they fail to emphasize or illustrate the application of statistical methods to literary material. To the best of my knowledge there exists no elementary statistical text in English written with the needs and interests of the literary student specifically in mind.

The reader of the present book is not assumed to have any mathematical competence beyond a rusty memory of junior school arithmetic and algebra. The illustrations in the text have been carefully chosen to make the calculations involved as simple as possible. The exercises have been carefully selected so that the calculation of the relevant statistics will be possible for anyone who can remember how to do long division. (They will not involve, for instance, the extraction of difficult square roots.) All these problems can be solved without the aid of a slide-rule, pocket calculator, or computer. To facilitate the solutions in this way the literary texts have occasionally been slightly doctored, and the statistics obtained are not usually of any literary interest except as illustrations of technique. Had the examples been less artificially chosen, the calculation would have been cumbersome without an aid such as a calculator, but the results would have been of greater interest from a literary point of view.

Any reader who proposes to become a serious student of literary statistics will have to acquire, sooner or later, a suitable calculator. However, the book is so designed that no one should need a calculator to follow the argument of the text or work out the exercises.

Calculators are now available at reasonable prices which not only facilitate the computation of statistics but also dispense with the consultation of statistical tables. For this reason the number of tables included in this volume has been kept down to the minimum necessary to introduce the various techniques involved to the reader who has not yet acquired a calculator.

The present book covers approximately the same ground as that in any first-year statistics textbook: it differs from other books in that it places emphasis on those techniques which are most useful in literary contexts and in the choice of examples drawn almost entirely from literary and linguistic material.

Like the readers for whom this book is intended, I came to statistics as a mathematical ignoramus with a purely humanistic background. I therefore owe a great deal to the text-books of other writers from which I have learnt. In acknowledging my debt to them, I shall also explain that they still seemed to leave room for a textbook aimed at a specifically humanistic audience.

The three textbooks I found most helpful were Donald Ary and Lucy Cheser Jacobs, *Introduction to Statistics: Purposes and Procedures*; Evelyn Caulcott, *Significance Tests*; George W. Snedecor and William G. Cochran, *Statistical Methods*. The first is the most clearly written and easily intelligible introduction to descriptive statistics I have encountered; the second gives the fullest coverage, at an elementary level, to the branch of inferential statistics which is most useful to the literary scholar. Both books, however, are aimed at the social scientist and draw their examples from sociology and economics and related fields. The third is considerably more advanced than the first two and progresses much further than the present volume. It contains much information that is useful to the literary statistician, but it is difficult going for someone without a mathematical background, and it is particularly oriented towards the agriculture, medical and biological sciences.

Charles Muller's *Initiation aux Méthodes de la Statistique Linguistique* is aimed at very much the same audience as the present book. However, there were a number of reasons why it seemed preferable to write a new book rather than to translate Muller for an English audience. In the first place, Muller's examples, naturally enough, are

drawn mainly from French literature and in particular from his own work on Corneille. In the second place, the book lacks exercises and would be difficult to use without the separately published *Exercices d'Application* as an elementary textbook. But any reader of the present book will be able to read Muller with pleasure and profit.

The present book, while introducing the reader to the use of statistical techniques in literary context, does not attempt any general evaluation of the merits of statistical stylometry; rather it attempts to put the reader in a position to make such evaluations for himself. There are a number of books canvassing the value of stylometry: a recent and lively one is A. Q. Morton's *Literary Detection*. Morton is an energetic and imaginative pioneer in the field, and most of his books contain a brief introduction to statistical methods; but in my view his presentation of these methods is too brisk and allusive to provide an initiation for the innumerate beginner.

I am very much indebted to N. D. Thomson who eliminated many errors from an early draft of this book. Responsibility for errors which remain is, of course, my own.

ANTHONY KENNY
Balliol, January 1981

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