

Cambridge University Press

978-0-521-87890-6 - How to Write and Illustrate a Scientific Paper, Second Edition

Bjorn Gustavii

Frontmatter

[More information](#)

## HOW TO WRITE AND ILLUSTRATE A SCIENTIFIC PAPER SECOND EDITION

This Second Edition of *How to Write and Illustrate a Scientific Paper* will help both first-time writers and more experienced authors, in all biological and medical disciplines, to present their results effectively. Whilst retaining the easy-to-read and well-structured approach of the previous edition, it has been broadened to include comprehensive advice on writing compilation theses for doctoral degrees, and a detailed description of preparing case reports. Illustrations, particularly graphs, are discussed in detail, with poor examples redrawn for comparison. The reader is offered advice on how to present the paper, where and how to submit the manuscript, and finally, how to correct the proofs. Examples of both good and bad writing, selected from actual journal articles, illustrate the author's advice – which has been developed through his extensive teaching experience – in this accessible and informative guide.

BJÖRN GUSTAVII has been teaching courses in scientific writing for doctoral (Ph.D.) students in medicine for 25 years. He brings his personal experience to this book, both from writing more than 100 of his own research papers and from his work as a journal editor.

Cambridge University Press

978-0-521-87890-6 - How to Write and Illustrate a Scientific Paper, Second Edition

Björn Gustavii

Frontmatter

[More information](#)

How to  
Write and  
Illustrate  
**Scientific Papers**

Björn Gustavii

*Second Edition*



Cambridge University Press

978-0-521-87890-6 - How to Write and Illustrate a Scientific Paper, Second Edition

Bjorn Gustavii

Frontmatter

[More information](#)

CAMBRIDGE UNIVERSITY PRESS

Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo

Cambridge University Press

The Edinburgh Building, Cambridge CB2 8RU, UK

Published in the United States of America by Cambridge University Press, New York

[www.cambridge.org](http://www.cambridge.org)

Information on this title: [www.cambridge.org/9780521703932](http://www.cambridge.org/9780521703932)

© B. Gustavii 2003, 2008

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

Originally Published in English by Studentlitteratur Lund, Sweden 2000

First published by Cambridge University Press 2003

Reprint 2005, 2006

Second Edition Published 2008

Printed in the United Kingdom at the University Press, Cambridge

*A catalogue record for this publication is available from the British Library*

ISBN 978-0-521-87890-6 hardback

ISBN 978-0-521-70393-2 paperback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication, and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

# Contents

Preface	v
Acknowledgements	vii
1 Basic rules of writing	1
2 Comments on scientific language	3
3 Drafting the manuscript	15
4 Choosing a journal	18
5 Preparing a graph	20
6 Drawings	38
7 Figure legends	40
8 How to design tables	42
9 Title	48
10 Authors	54
11 Abstract	58
12 Introduction	61
13 Methods	63
14 Results	68
15 Discussion	74
16 Acknowledgments	79

Cambridge University Press

978-0-521-87890-6 - How to Write and Illustrate a Scientific Paper, Second Edition

Bjorn Gustavii

Frontmatter

[More information](#)

---

17	References	81
18	Ph.D. and other doctoral theses	91
19	Letters and case reports	101
20	Numbers	105
21	Abbreviations	111
22	How to present statistical results	114
23	Typing	120
24	Dealing with editors and referees	132
25	Correcting proofs	137
26	Authors' responsibilities	142
	Literature needed on your desk	150
	Further reading	152
	Literature cited	156
	Index	164

# Preface

Dear Novice Writer,

When I was in your shoes and preparing my first paper, I consulted a book on how to write. I found there a sentence encouraging the reader to stand in boiling water for an hour before doing the analysis:

After standing in boiling water for an hour, examine the contents of the flask.

I had a pretty good idea of what was wrong with the sentence but, at the time, I couldn't figure out how to revise it, and the author didn't tell me. Now I can. If, an hour later, you are still alive:

Place the flask in boiling water for an hour, then examine its contents.

So, in this book, every unfortunate example is followed by an improved version. Good examples are provided with appropriate bibliographic references. Bad ones, however, are presented with references expunged.

Some examples were taken from manuscripts in preparation, presented by participants in my courses on scientific writing. I have

been holding such courses for doctoral (Ph.D.) students in medicine since 1980. Other specimens are from manuscripts submitted for publication. They were collected when I served as an editor of *Acta Obstetricia et Gynecologica Scandinavica* from 1986 to 1994. Yet others are from published material.

From class discussions I have learned what candidates want to know. Based on this information, some chapters are more detailed than others, such as the one on how to prepare graphs.

The current edition contains a new and comprehensive chapter on doctoral (Ph.D.) theses. Numerous other changes also appear in this edition, for example, instructions for making drawings and a description of preparing case reports.

Finally, don't accept all my suggestions, because there is no ultimate truth regarding how to write a paper – as I mistakenly believed when I was a bit younger.

Good luck, my friend.

Björn Gustavii

# Acknowledgments

I thank the following persons, who have read all or parts of the manuscript of the second edition, for their advice and criticism.

Per Bergsjø, Norway

Carol Brimley-Norris, Finland

Joy Burrough-Boenisch, UK

Johan Ljungqvist, Sweden

Helen Sheppard, Sweden

Ray Williams, UK

Pål Wölner-Hanssen, Sweden

Special thanks to Tomas Söderblom, a layperson, who read the manuscript for intelligibility; Richard Fisher, who corrected the language; and Eva Dagnegård, who redrew the graphs and prepared the electronic manuscript.