



Effective Writing in Psychology

Papers, Posters,
and Presentations

THIRD EDITION

Bernard C. Beins
and Agatha M. Beins

WILEY Blackwell

Effective Writing in Psychology

Effective Writing in Psychology

Papers, Posters, and Presentations

Third Edition

Bernard C. Beins and Agatha M. Beins

WILEY Blackwell

This third edition first published 2021
© 2021 John Wiley & Sons, Inc.

Edition History

Blackwell Publishing Ltd (1e, 2008), John Wiley & Sons, Inc. (2e, 2012)

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, except as permitted by law. Advice on how to obtain permission to reuse material from this title is available at <http://www.wiley.com/go/permissions>.

The right of Bernard C. Beins and Agatha M. Beins to be identified as the authors of this work has been asserted in accordance with law.

Registered Offices

John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, USA
John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK

Editorial Office

The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK

For details of our global editorial offices, customer services, and more information about Wiley products visit us at www.wiley.com.

Wiley also publishes its books in a variety of electronic formats and by print-on-demand. Some content that appears in standard print versions of this book may not be available in other formats.

Limit of Liability/Disclaimer of Warranty

While the publisher and authors have used their best efforts in preparing this work, they make no representations or warranties with respect to the accuracy or completeness of the contents of this work and specifically disclaim all warranties, including without limitation any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by sales representatives, written sales materials or promotional statements for this work. The fact that an organization, website, or product is referred to in this work as a citation and/or potential source of further information does not mean that the publisher and authors endorse the information or services the organization, website, or product may provide or recommendations it may make. This work is sold with the understanding that the publisher is not engaged in rendering professional services. The advice and strategies contained herein may not be suitable for your situation. You should consult with a specialist where appropriate. Further, readers should be aware that websites listed in this work may have changed or disappeared between when this work was written and when it is read. Neither the publisher nor authors shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages.

Library of Congress Cataloging-in-Publication Data

Names: Beins, Bernard, author. | Beins, Agatha, 1976– author.
Title: Effective writing in psychology: papers, posters, and presentations / Bernard Charles Beins, Ithaca College, Ithaca, NY, Agatha Meryl Beins, Texas Woman's University, Denton, TX.
Description: Third Edition. | Hoboken: Wiley, 2021. | Revised edition of the authors' Effective writing in psychology, 2012.
Identifiers: LCCN 2020024017 (print) | LCCN 2020024018 (ebook) | ISBN 9781119722885 (paperback) | ISBN 9781119722908 (adobe pdf) | ISBN 9781119722946 (epub)
Subjects: LCSH: Psychology—Authorship.
Classification: LCC BF76.7.B45 2020 (print) | LCC BF76.7 (ebook) | DDC 808.06/615—dc23
LC record available at <https://lcn.loc.gov/2020024017>
LC ebook record available at <https://lcn.loc.gov/2020024018>

Cover Design: Wiley

Cover Image: © Eskay Lim/EyeEm/Getty Images

Set in 10.5/13pt Minion by SPi Global, Pondicherry, India

*To Linda, Simon, Jenny, Evie, and Julian, our wonderful family that makes
everything special*

Contents



Preface to the Third Edition	xii
Preface to the Second Edition	xiv
Preface to the First Edition	xv
1 Writing Professionally	1
<i>Introduction to Writing in Psychology</i>	1
<i>How Does Professional Writing Differ From Other Kinds of Writing?</i>	3
<i>Using APA Style</i>	4
<i>Making a Credible Argument</i>	5
<i>Different Types of Communication</i>	6
<i>Effective Communication</i>	8
<i>How to Begin</i>	9
Part I Organizing and Developing Your Ideas and Writing	11
2 Formulating Your Ideas	13
<i>Identifying Your Focal Question</i>	13
<i>Locating Relevant Sources</i>	16
<i>Recognizing Multiple Viewpoints</i>	19
<i>Ethical Writing</i>	20
3 Assessing Your Sources	25
<i>The Difference Between Primary, Secondary, and Tertiary Literature</i>	26
<i>The Difference Between Popular and Scholarly Sources</i>	27

	<i>Evaluating Sources</i>	29
	<i>Evaluating Internet Sources</i>	31
4	How to Conduct a Literature Search	39
	<i>Understanding the Purpose of a Literature Search</i>	39
	<i>Understanding Library Resources</i>	41
	<i>Using Article Databases</i>	46
	<i>Using the internet</i>	48
	<i>Using Sources to Find Sources</i>	50
5	How to Read and Summarize a Journal Article	51
	<i>Understanding Journal Articles</i>	51
	<i>Overview of the Research—the Abstract</i>	53
	<i>Identifying the Issues—Introduction Section</i>	53
	<i>Understanding What Was Done—Method Section</i>	54
	<i>What Happened—Results Section</i>	56
	<i>What It Means—Discussion Section</i>	59
	<i>Where the Ideas Originated—References Section</i>	61
	<i>Figuring out What It Means</i>	61
6	Organizing a Paper	63
	<i>Organization</i>	64
	<i>Using the Work of Others to Support Your Argument</i>	66
	<i>Editing and Revising</i>	71
	<i>Mechanics</i>	73
7	Elements of Style	75
	<i>Recognizing the Importance of Grammar and Style</i>	76
	<i>Choosing Effective Wording</i>	78
	<i>Using Inclusive and Appropriate Language</i>	81
	<i>Deciding on the Use of Technical Language</i>	83
	<i>Avoiding Common Problems</i>	84
	<i>Verb Forms</i>	86
	<i>Spelling</i>	88
	<i>Specific Word Use</i>	88
8	Communicating Statistics	95
	<i>Importance of Understanding Statistics</i>	95
	<i>Why Do We Use Statistics?</i>	96
	<i>What Point Are You Trying to Make?</i>	97

<i>Understanding Your Numbers</i>	99
<i>Helping Readers Understand Your Statistics</i>	101
<i>Differentiating Results and Interpretations</i>	104

Part II Preparing APA-Style Papers 105

9 Writing a Thesis or a Term Paper	107
<i>Framework for Writing a Term Paper</i>	107
<i>Developing Your Idea</i>	108
<i>Organizing Your Paper Around the Central Questions</i>	112
<i>Finding Different Perspectives About Your Idea</i>	114
<i>Developing the Logic of Your Argument</i>	117
10 The Introduction Section	121
<i>Introducing the Topic</i>	122
<i>Different Approaches to Starting the Introduction</i>	122
<i>How to Begin</i>	126
<i>Reviewing What Others Have Already Done</i>	126
<i>Reasons for Reviewing the Literature</i>	127
<i>Clarifying Terms in the Research</i>	128
<i>Introducing Your Research: Generating a Hypothesis</i>	129
11 The Method Section	131
<i>Participants and Subjects</i>	132
<i>Materials and Apparatus</i>	140
<i>Procedure</i>	142
<i>Design</i>	143
12 The Results Section	145
<i>Providing a Good Ending</i>	145
<i>Your Hypotheses</i>	146
<i>Deciding What to Present</i>	147
<i>Reporting Significant and Nonsignificant Results</i>	148
<i>Marginally Significant Effects</i>	150
<i>APA Style and Presentation of Your Results</i>	151
<i>Creating Tables</i>	154
<i>Creating Figures</i>	159
<i>The Connection Between the Text and the Tables and Figures</i>	162
<i>The Difference Between Results and Discussion Sections</i>	164
<i>Some Final Points About Presenting Results</i>	167

x Contents

13	The Discussion Section	169
	<i>Summarizing Your Results</i>	170
	<i>Connecting Different Aspects of Your Results</i>	171
	<i>Dealing With Nonsignificant Results</i>	172
	<i>Comparing Your Results With Those of Others</i>	173
	<i>State the Importance and Implications of Your Results</i>	174
	<i>Acknowledging the Limitations of Your Study</i>	175
14	References: Citations in the Text and the Reference List	177
	<i>Purpose of the References Section</i>	177
	<i>Citing References in the Text</i>	178
	<i>Order of Citations in the Reference List</i>	181
	<i>Using Your Word Processing Program to Create the Citation</i>	182
	<i>Examples of How Different Types of References Should Be Laid Out in a Reference List</i>	183
	<i>Examples of Different Types of Citations in the Reference List</i>	188
	<i>References Involving Books</i>	190
	<i>Presentations</i>	192
15	Final Touches: The Abstract and Formatting Details	195
	<i>The Abstract</i>	196
	<i>Formatting Details</i>	197
Part III Communicating Beyond the Research Paper		221
16	Creating Poster Presentations	223
	<i>Differentiating Visual and Written Communication</i>	224
	<i>Reducing the Amount of Information</i>	224
	<i>Visual Style</i>	225
	<i>Your Behavior: The Ethic of a Poster Session</i>	228
	<i>Creating Your Poster Using PowerPoint</i>	230
17	Giving Oral Presentations	237
	<i>The Difference Between Oral and Written English</i>	237
	<i>Adapting APA Style to Oral Presentations</i>	242
	<i>Preparing for Your Talk</i>	242
	<i>Creating Graphics for Your Presentation</i>	244
	<i>Giving the Presentation</i>	245

18 Presenting Your Work on the Internet	247
<i>New Capabilities with Internet Publication</i>	248
<i>Using a Word Processor to Create Manuscripts for the Internet</i>	249
<i>Advantages of Internet Publishing Software</i>	252
<i>Publishing Your Poster on the Web</i>	254
<i>Uploading Your Manuscript to the Internet</i>	254
19 Submitting Your Plan to an Ethics Committee	255
<i>Ethical Standards in Research</i>	256
<i>Writing a Proposal for an Institutional Review Board for Research With Human Subjects</i>	257
<i>Writing a Proposal for the Institutional Animal Care and Use Committee (IACUC) for Animal Research</i>	262
Appendix A Example of APA-Style Manuscript with Common Errors	265
Appendix B Corrected APA-Style Manuscript	273
References	283
Author Index	295
Subject Index	298

Preface to the Third Edition



A writing project is never really complete. We just decide that we are through with it or encounter a deadline. Anybody who has embarked on writing projects knows that there is always more to say; and, in retrospect, we invariably think of how it could have been better.

This book is no different. After the first edition, we spotted places where we thought we could have been clearer, our prose could have been crisper, and we could include new information. When we finished revising the book for the second edition, we tried to remedy the flaws that we saw in the first. (It's probably the case that nobody else saw a particular need to change things, but we did.)

For this edition, we again tried to improve the book. There are some topics that we thought were clearly in need of amendment. For example, how we describe certain groups of people has changed since the second edition; and because university library websites have changed, some of the guidance about searching for resources now seem obsolete. Revisions such as these are designed to ensure that our book continues to be a useful resource for your writing.

In addition, the American Psychological Association (APA) developed the seventh edition of its publication manual, necessitating significant revisions of the chapters on APA style. Some of the guidelines from previous versions of the manual represented an era when an editor may have had stacks of paper manuscripts that could become mixed up if not properly labeled. With electronic communication, some of those guidelines became irrelevant. This edition of our writing book presents the formatting that is

most relevant to papers you are likely to write, but the full style manual contains much more information, and we encourage you to use it as a resource if you have a question or encounter a situation not covered in this book. We have tried to eliminate elements that you probably won't need to know about, which we hope should make it easy to find the information in the book that you need at any point in your writing.

We also found certain spots where, once again, we thought we could strengthen our writing and have tried to remedy those concerns. But as we noted at the beginning of this preface, the project is never really complete. We will undoubtedly spot aspects of this edition that, in retrospect, we would change. Nevertheless, we are confident that the book will provide you with the tools you need to produce high-quality writing.

In creating this work, collaborating as a father/daughter team has once again been pure delight. It is rare to be able to combine the personal and the professional so wonderfully.

Finally, as with the earlier editions, the final product would not be complete without the work of the professionals at Wiley-Blackwell, including Darren Lalonde, Monica Rogers, and Rajalakshmi Nadarajan.

Preface to the Second Edition



A writing project is never done. If you are thoughtful about your writing, you will always spot elements in your prose that you think could have been better. Thus writing a book like this one leads to a process, not a product. So, when we wrote the first edition of *Effective Writing in Psychology*, we recognized that it would be a helpful book with an interesting approach to writing. But there were also a few places where we wondered if we could have made our point more effectively or written more clearly.

So with this edition of *Effective Writing* we have had the opportunity to do it again, only better. Happily, we think that there were only a few instances in the first edition that needed clarification, expansion, or rewording. But we tried to take care of them to make the book even stronger. We hope you benefit from the changes we made.

In addition, as with any evolving domain, the technical aspects of writing in APA style have changed since the first edition of *Effective Writing* appeared. So we have adapted the sections on writing in APA style to conform to the sixth edition of the *Publication Manual of the American Psychological Association*. Many changes to the publication manual are minor, so you will be able to learn and implement them easily. It has been as delightful working on this edition as it was on the first edition of *Effective Writing*. A father-daughter collaboration is a joy. Our work together constantly reminded us of our mutual respect at the personal and professional levels.

As always, though, a project like this does not happen by accident. It requires collaborative efforts on the part of many people. We are grateful to the professionals at Wiley-Blackwell for their help, in particular Matt Bennett, Nicole Benevenia, and Julia Kirk.

Preface to the First Edition



Mark Twain recognized the importance of effective writing skills when he said, “The difference between the right word and the nearly right word is the same as that between lightning and the lightning bug.” We wrote this book to help writers generate their own version of lightning when they write papers, create posters, or develop presentations in psychology.

As we have taught courses in writing and in psychology (one of us for over a third of a century), we have become very aware how important it is for students and researchers to develop solid communication skills. No matter what type of professional work you undertake, it will be critical for you to convey your ideas well.

As you write and communicate in psychology, you will face challenges that some other types of writers do not. Writing in psychology involves two separate components. One concerns the ability to create clear and crisp prose that people want to read. The second relates to the ability to convey a compelling message in technical and scientific language. All too often, scientific writers understand their concepts exceedingly well, but they fail to present a message that readers can understand, appreciate, or even want to read. Here this book enters the picture. We present suggestions and guidelines that will help you create interesting papers and cogently delivered oral presentations that will capture the attention of others.

This book will help writers at all levels of experience and skill. Some components of the book are oriented toward effective writing and give tips that are relevant for communicating with many different readerships. Other components provide direction for successful use of writing in APA style. By

using both of these aspects of the book, first-time and experienced writers can be comfortable knowing that their words will have an impact and that their work will be recognized as of professional quality.

We have worked to make this book both accessible and useful. At the same time, we have made it rigorous because writing should be as clear and precise as it is interesting.

Organization of This Book

The book begins with an overview of different kinds of writing and what makes writing for psychology different. In addition, we introduce some of the principles for developing credible arguments and effective communication, whether you are writing, speaking, or creating graphic presentations. We also introduce APA style, which is common in many of the behavioral and social sciences.

The book details guidelines on developing your own ideas and conducting Internet and library research to integrate them with issues that others have already addressed. The next focus of the book involves organizing your thoughts and beginning the process of writing and revising.

Following the chapters on effective communication strategies, we offer guidance on the technical aspects of writing a paper in APA style. In Chapters 10 through 15, you will learn how to use APA style accurately and effectively. If you have not already discovered that APA style involves detail after detail, you will learn it here. But we explain those details in ways that will permit you to follow them as you need to.

We also recognize that not all scientific communication occurs through papers. Consequently, in the last section of this book, we offer strategies for creating poster presentations, giving oral presentations, developing Internet presentations, and writing proposals for institutional review boards.

Finally, we have included a sample APA-style paper to help you write and format your own work. One of the unique features of the sample paper is that it contains annotated errors that writers frequently make. Seeing a paper that illustrates errors that you might make often helps your writing more than seeing flawless papers. If you don't know that you made a mistake, it is hard to know that you need to correct it.

Features

We provide features in this book that we hope will make the process of writing more effective and efficient. First, we tell you not only what constitutes good writing, but why. As a result, you should be able to generalize the points beyond the specific examples we use. Furthermore, the examples in the book come from published research, which gives you a good sense of how effective writers convey their ideas.

Second, we use many tables and figures that illustrate specific guidance in many areas that pose problems for writers. Rather than simply listing formatting details, we have tried to bring them to life in ways that you will be using them.

Finally, as we noted above, we include examples of the types of errors students and researchers actually make. You can learn from the mistakes of others. The sample paper in the appendix includes stylistic and formatting errors that commonly occur so that you can see what to avoid.

Acknowledgments

A book is the product of its authors, but it also takes its final shape because of the contributions of others. For this book, we have benefited from the help of Linda Beins, a librarian extraordinaire with extensive insights into finding and developing information. We were also fortunate to have the keen eyes and intellect of Stephen F. Davis, Kenneth D. Keith, and Suzanne Baker, who provided us with feedback on early versions of the chapters.

Finally, we are grateful for the consistent help of Chris Cardone, executive editor, and Sarah Coleman, development project manager, two of Wiley-Blackwell's astute staff who have made this project as seamless as it could have possibly been.

1

Writing Professionally



Write what matters. If you don't care about what you're writing, neither will your readers.

Judy Reeves

I'm not a very good writer, but I'm an excellent rewriter.

James Michener

When you write about psychology or any of the other sciences, you are telling a story about people. Scientists are people, complete with individual personalities, likes and dislikes, and ordinary human qualities. The way they are affects what they do and how they do it. As such, “science writing is not so much about science, but about people—human problems and their solutions, curiosity and discovery” (Holland, 2007). In this book, you will learn how to convey your thoughts on the important problems and solutions in psychology.

Introduction to Writing in Psychology

It would be hard to overstate how important it is to write effectively. Writing constitutes one of the “3 Rs” of a basic education: reading, writing, and arithmetic. In the world of business, success is dependent, in part, on effective writing. For high-level positions, “writing is a ‘threshold skill’ for both

Effective Writing in Psychology: Papers, Posters, and Presentations, Third Edition.

Bernard C. Beins and Agatha M. Beins.

© 2021 John Wiley & Sons, Inc. Published 2021 by John Wiley & Sons, Inc.

2 *Writing Professionally*

employment and promotion” (College Board, 2004, p. 3). In one survey, many companies noted that writing was important in hiring. One respondent asserted that, “in most cases, writing ability could be your ticket in ... or it could be your ticket out” (College Board, 2004, p. 3). Potential employees who do not write well are unlikely to be hired and, if they are, are unlikely to be promoted.

Graduate school admission may also depend on writing effectiveness. Graduate programs routinely request essays as part of the application process. This writing is “often used to make final selections of students with similar GPAs and standardized test scores. If you are on the borderline of being accepted and the admissions committee could go either way, a sterling essay can increase your chances of success considerably” (American Psychological Association [APA], 2007).

The type of writing that you learn in psychology provides the same skills that will help advance your career. You develop clarity and logic in your ideas, along with a style that will engage the reader. If you create such prose, you will attract the attention of possible employers and graduate school admissions committees, and you will effectively present your ideas in psychology.

Most people find psychology interesting and are eager to learn more about it. But they do not want to fight through dull and meaningless writing. As writers, our biggest hurdle involves turning complex, technical concepts into prose that others can appreciate.

Writing successfully is not easy. It requires knowledge of the topic we are addressing; judicious selection of the best words, phrases, and sentences; and editing and revising what we have composed. If there were a magical formula that we could use to generate good prose, everybody would succeed in communicating even complex and hard-to-understand ideas. If you have read the work of scientists, though, you will have discovered that, much of the time, scientific writing is dense and impenetrable. Many writers hide interesting concepts inside packages of dull prose.

On the other hand, people sometimes produce lively prose that may not convey the message accurately. Engaging, but deceptive, prose is no better (and may be worse) than accurate, incomprehensible writing.

Fortunately, there is the desirable middle ground that Sigmund Freud and Williams James occupied, where prose was stimulating, not sleep inducing. Those of us who do not initially fall into this category can learn to communicate effectively. The purpose of this book is to help you find the path to better communication. If you are motivated, you can work on the skills you need to get your point across meaningfully and accurately.

How Does Professional Writing Differ From Other Kinds of Writing?

If you are trying to write like a psychologist, your style will be unlike much of the writing that you have done in the past. When psychologists write professionally, they usually attempt to convey specific information with a great deal of precision, minimizing ambiguity and the possibility of misunderstanding. The adage to say what you mean and mean what you say is highly appropriate for technical writing. You want your reader to understand the points you believe are important, and you want the reader to know exactly what you intend to say.

In other forms of writing, the emphasis may be on crafting artistic prose. The writer attempts to impress the reader with both content and style. The words that Shakespeare wrote for *Macbeth* illustrate the point. *Macbeth* lamented that life “is a tale told by an idiot, full of sound and fury, signifying nothing.” These poetic words convey *Macbeth*’s despair. However, Shakespeare’s style would not be appropriate for a scientist because the style of science is to be straightforward and unambiguous so the reader does not have to puzzle through the words to find meaning in them.

Psychologists often receive training in how to write objective, scientific papers. Unfortunately, the writing style is often “bloodless” (Josselson & Lieblich, 1996, p. 651), meaning that it is not particularly engaging. Sommer (2006) has encouraged psychologists to learn to write with color and style for lay audiences without sacrificing accuracy. But he also implied that the writing style in academic journals need not be dreary.

In scientific writing, we focus on the content of the message. The point is not to impress the reader with the prose, but to render the prose invisible while making the content foremost. This type of writing can be as difficult to do well as literary writing because you need to be concise without omitting important information; you need to choose your words carefully so they engage the reader without obscuring your point; you need to say enough to let your reader understand your message without being repetitive.

Another difference among the various types of writing is that, when we write scientifically or technically, we generally rely on a vocabulary specific to the topic at hand. Professionals understand this wording, but others are not likely to be as conversant with the terminology. This is one of the reasons that scientific writing has the reputation of being incomprehensible—you need to know the jargon. (The concepts are also complex and may be hard to understand, which does not help.) Actually, technical terms are helpful

4 Writing Professionally

because they let us communicate complex ideas clearly in a few words, although if you do not know the meanings of the words, the prose is meaningless or, at best, difficult.

Using APA Style

A further difference between scientific or technical writing and less formal writing is that, in science, authors typically follow a specific format in preparing reports. In psychology, for instance, authors use guidelines that appear in the *Publication Manual of the American Psychological Association* (American Psychological Association [APA], 2020), commonly just called APA Style. (Some other disciplines, such as sociology, education, and nursing, also use APA style.) Research reports usually include six sections, as described in Table 1.1.

Most of the time, if a writer submits to a journal editor a manuscript that deviates from an expected style, the editor is not likely to reject the manuscript as unsuitable for publication. Instead, editors work with authors so that the final version of the manuscript is consistent with APA style (Brewer,

Table 1.1 *Typical Sections in an APA-Style Research Report*

<i>Section of the report</i>	<i>What the section contains</i>
Title page	The title of the paper, the names of authors, and the affiliations of the authors
Abstract	A brief overview of the entire project of about 150–250 words
Introduction	The background and logic of the study, including previous research that led to this project
Method	Minute details of how the study proceeded, including descriptions of participants, apparatus, and materials, and what researchers and participants actually did during the study
Results	A detailed statement of the statistics and other results of the study
Discussion	What the results tell us about thought and behavior
Reference	Where to find the work cited in the paper that relates to the present study

Scherzer, Van Raalte, Petitpas, & Andersen, 2001). However, editors have commented that deviations from APA style often accompany problems with the content of a manuscript. So if you create a manuscript that fails to follow appropriate style, a reader who is familiar with (and used to) APA style may assume that you paid as little attention to your ideas as you did to the way you expressed them. In the workplace, employers have expressed similar sentiments, that poor writing reflects poor thought (College Board, 2004).

According to the research of Brewer et al. (2001) on the use and the importance of APA style, writers are likely to depart from APA style in their presentation of research results and in citing references. So you should pay particular attention to these facets of your writing. If you write a paper in APA style that does not involve empirical research and data analysis, APA style can still apply. The structure of your paper is likely to have elements in common with the Introduction, Discussion, and Reference sections of a research paper, which we discuss in later chapters. Once you learn the basics of APA style, writing an effective paper might be easier than you anticipated because you will have a good sense of what belongs in a paper and where it goes.

As you write for a professional audience, keep in mind that readers are willing to be convinced with persuasive arguments, but you have to convince them. Scientific writing entails presenting a series of logical arguments that follow from one another. At the end, your good logic is going to make a believer out of your reader. If we are going to accept the process of science, it means that when a writer offers a logical argument that is supported by good data, we should be willing to accept that argument.

Making a Credible Argument

The difference between scientific writing and other writing has to do with the nature of how psychologists attempt to persuade readers. In everyday life, if you want you to change somebody's mind about something, there are several ways of doing it. One is to appeal to authority. That is, by quoting an expert (i.e., an authority), you can often convince people to believe you. After all, experts know more than others in their field of expertise. Unfortunately, experts can be wrong.

You can also appeal to what "everybody" knows is true; some things are so obvious, they must be true. Unfortunately (again), there are some things that everybody knows to be true that simply aren't true.

6 *Writing Professionally*

You can also appeal to others' emotions. Politicians and advertisers do this all the time. Unfortunately (again), conclusions based on emotional appeals can make a person feel good about a decision that, ultimately, proves to be troublesome. Furthermore, such conclusions are often not very stable (Petty & Cacioppo, 1986).

We should not simply believe the experts (even though they are probably right more than they are wrong in their areas of expertise). They should have to convince us with logical arguments. We should not simply trust our senses (even though a lot of what we feel to be true has some validity). We should not simply believe in what makes us feel good or reject what makes us feel bad; it should have logical validity.

When trying to convince your reader of your arguments, you should engage the reader in critical evaluation of your ideas. Research has revealed that persuasion based on logic and on attention to important details leads to greater and longer-term acceptance of an argument. This is the type of persuasion that you should strive for in your writing.

Different Types of Communication

If you want to communicate with your audience, you need to know what your audience expects. Depending on whether you are writing, speaking, or presenting visually, your approach will differ somewhat, even if the underlying message is the same.

Written Communication

If you are writing a formal, APA-style research report, as you would for publication in a journal, your reader will expect a structured presentation with considerable detail. The advantage of such a written presentation is that your reader can go back and review the background you cite, review your methodology to make sure it is sound, evaluate your results to judge if they are appropriate, and see if your conclusions are justified from your results and if they relate to the ideas you presented in your introduction. A written document is a permanent document that the reader can go back to at will.

Professionals (including professors) expect the writing to be free from colloquial or informal expressions and to be entirely grammatical. You should choose your words carefully because they are lasting expressions of your ideas.

Oral Communication

In contrast, if you are delivering that same research in an oral presentation, you cannot possibly pack the same level of detail and expect your audience to understand your ideas. Working memory is limited to between three and seven chunks of information. So if you are talking to people in an audience, it does not make sense to introduce as many ideas as you would in writing; your audience cannot go back to review what you have already said. They are forced to listen to your ideas in the present and can keep track of perhaps five ideas.

In an oral presentation, you should limit yourself to three or four main points you want your listeners to remember. You can introduce minor points to help reinforce the major ideas, but your audience will have a hard time keeping the details in memory. Professional speakers suggest that you tell your audience what you are going to say, then say it, and finally tell them what you just told them. There is something to this philosophy, although in a research presentation, you should not be quite so simplistic. You should establish the framework of your presentation and repeat critical points when appropriate. Still, in the short period of time allotted to oral presentations, usually 10–15 minutes, you are limited in the amount of information you can convey, just as the audience is limited in its ability to comprehend your ideas.

Poster Presentations

Yet another medium of expression is visual. Increasingly, research conferences are relying on poster presentations for reporting research findings. In this form of communication, you present all your information in a small display that might be about 4 ft × 6 ft (i.e., 1.3 m × 2 m) in size. The dimensions vary from one conference to another, but the amount of space always seems to be smaller than you would want.

One of the worst things you can do is to fill the poster with text. Nobody wants to fight through a poster with endless strings of sentences. The viewer is typically interested in your main points. The use of tables, figures, bulleted points, and other eye-catching features is a good idea in a poster. During such a presentation, the author of the poster is typically present, so if viewers want to know more details than are available on the poster, they can simply ask.

So, for a poster, you should present the main points with as little text as you can get away with. Visual elements are often a more meaningful way to make your points accessible. The result is often more information than in an oral

presentation, but less than in a complete APA-style research report. It helps that the researcher is present to clear up any misconceptions that arise because not all the information is available on the poster. Furthermore, if you are presenting a poster, you can create a handout that resembles an APA-style manuscript. In this way, interested people can get the gist of your research and can ask you any questions that come to mind right away. Then they can take your written handout and attend later to the level of detail they desire.

Internet Publishing

A relatively new option for communicating your ideas is through the internet. Web presentations combine various features of traditional manuscripts and of visual displays, but there are some additional elements that foster effective communication. A web-based presentation allows easy use of visual elements that are often too costly to include in printed manuscripts. In addition, you can use hyperlinks with your text to refer the reader to related web material or to references.

A simple web page is fairly easy to create if all you need is to present text, figures, or pictures, and hyperlinked text. It is helpful to know the code for the language of the web, HTML (HyperText Markup Language), but with the authoring software on the market, knowing HTML is not absolutely necessary. Fortunately, it is fairly easy to learn. You can even save word-processed documents in HTML format, although generating a well-formatted web page from a word processor can be tricky.

Effective Communication

A professor named Denis Dutton held a bad writing contest for a few years. The sentence that motivated him to begin the contest appears below; it was about an attempt at educational reform. The prose, which was not intended to be bad, was absolutely incomprehensible. (You should not feel bad if you don't understand it.)

[It] would delegitimize the decisive, if spontaneous, disclosure of the complicity of liberal American institutions of higher learning with the state's brutal conduct of the war in Vietnam and the consequent call for opening the university to meet the demands by hitherto marginalized constituencies of American society for enfranchisement. (Dutton, 1999)

This book is an attempt to prevent you from writing such incomprehensible prose.

No matter what you choose as your medium of presentation, there are some characteristics of good communication to remember. First, you should establish your theme and organize your thoughts around it. Developing an outline or an idea map (as illustrated in Chapter 2) can be very helpful. To create either requires that you know what you want to say. It is tempting sometimes to start writing without a coherent idea of your message. If you operate this way, your writing may meander toward irrelevant topics.

Second, if you want to communicate effectively, you should make sure that your grammar is flawless and that your selection of words is judicious. When your writing is technically competent, your reader will not be distracted from your message by having to figure out what you mean. You also need to go back to your work to edit and revise it. It helps to re-read your work when it is not fresh in your own mind; sometimes you can spot problems that were not initially apparent. In addition, your writing may benefit if you ask somebody to read your work and explain to you what is unclear. Mark Twain recognized the importance of revising one's work: "The time to begin writing an article is when you have finished it to your satisfaction. By that time, you begin to clearly and logically perceive what it is you really want to say" (Writing, n.d.).

Finally, it is important to remember that even lengthy manuscripts begin with a single sentence. In order to maximize the effectiveness of your writing, you should set up a schedule and a process. B. F. Skinner is a good example; he was an early bird, so he arose and did his writing for a few hours in the morning, a practice that he continued right up until his death.

How to Begin

Find a place where you can concentrate free of distraction, at a time when you are clear-headed. If you are a night owl, that may be the best time for you to write; if you are an early-morning lark, that would be a good time. In either case, you should establish a routine. Writing does not happen until you do it. And when you develop your routine, remember to positively reinforce yourself. Identify a goal for your writing session and reward yourself when you reach it. So you might decide to explore and write about a given topic for 30 minutes. After 30 minutes, you should reward yourself with a break.

You may need to shape your behavior first, though, so you might need to start with a shorter work period, gradually extending it until you identify the longest period of time during which you can write effectively. Psychologists have identified a phenomenon called *post-reinforcement pause*. It refers to a period of time after a reinforcement when the animal (including the human animal) stops working toward another reinforcement (Felton & Lyon, 1966). You should make sure that your post-reinforcement pauses are not too lengthy.

By developing good writing habits, you will have taken the first step toward successful communicating. The task is often not easy, but the results are eminently satisfying.

In the next chapters, we will explore how you can develop your ideas, connect them to what others have already written, and express them in a style that reflects a sophisticated knowledge of psychology. In the end, you will have an impact on your audience when you write and when you speak about psychology.