

The Elements of Technical Writing

Joseph A. Alvarez SANTA ROSA JUNIOR COLLEGE



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COVER Detail of Leonardo da Vinci's *Spinning Wheel* c. 1490.
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TO KRISTA

**...IT IS AS CRAFTSMEN THAT WE
GET OUR SATISFACTION AND OUR PAY.
—Learned Hand**

The Shakespearean scholar G. B. Harrison has written that his most effective training in writing was as a staff captain in World War II coordinating 72 miscellaneous military units. "It is far easier to discuss Hamlet's complexes," he explained, "than to write orders which ensure that 5 working parties from 5 different units arrive at the right place at the right time equipped with proper tools for the job."

Captain Harrison faced what every technical writer faces: the necessity of being clear and accurate, coherent and concise. This challenge, and how to meet it, is the subject of this book.

Technical writing is coming of age, and the following pages are directed to anyone interested in it. This includes technical and business students as well as writers in business, industry, the sciences, and the professions. But since the book's premise is that technical writing is chiefly writing and only secondarily technical, it is addressed to anyone who writes in school or on the job.

The emphasis on technical writing as writing may be more radical than it seems. Many texts treat technical writing as a separate genre, a distinctive category of writing, with "psychological," "linguistic," "sequential," and "functional" differences that distinguish it from other writing. But what distinguishes technical writing from other writing is none of these; rather, it is special knowledge, and often a special vocabulary. The authors of these texts perhaps confuse the sometimes esoteric nature of technical material with the straightforward description of it. They may have forgotten that writing—any kind of writing—remains the selection and arrangement of words, whatever those words may be, whatever purpose they may have, whatever subject they may refer to.

PREFACE

Another principle of this book is that usage is the arbiter of language, that rules should reflect usage rather than dictate it. In that sense, this book is descriptive rather than prescriptive. I also believe that the standard of writing—especially of technical writing—should be less “correctness” and more effectiveness: does it do the job? The questions then become: how does it work and why? If it doesn’t, why not? And what are some alternatives?

In matters of form, I have followed the University of Chicago Press’ Manual of Style; but I have not adhered to it rigidly. I believe that function ultimately determines form, and when the two conflict, I favor function. In matters of form, there is seldom absolute agreement anyway. Like universal language, universal form eludes us; most disciplines, most companies, create their own. And the value of one or another lies less in any inherent virtue than in the force of habit and the security of familiarity.

The book itself is designed not only as a guide to technical writing but as a reference for writers. It consists of 50 axioms arranged in 8 sections that cover major problem areas in writing: Principles, Words, Sentences, Organization, Punctuation, Format, Style, and Method. In science an axiom is, according to Webster’s Third New International Dictionary, “a proposition regarded as a self-evident truth.” Writing, however, is not a scientific activity. My use of axiom rests on the meanings of its original Greek roots: axioun, “to think worthy,” and agein, “to weigh.” In writing there are opinions, not truths, and their worth depends on the perspective of the writer and the reader.

The examples in the text follow the points they illustrate. I have drawn their subject matter from science, business, industry, philosophy, politics, education, law, and even poetry. To save space, I have used portions of the text itself as examples. I also have suggested several exercises at the end of each section. My first priority in the examples and exercises has been to clarify the point; my second has been to make them interesting.

My purpose here is to help writers learn how to say what they mean and to say it clearly. In the end, writing comes down to a succession of choices that the writer must resolve: this idea here, that one there; one word instead of another; one long sentence rather than two short ones; and so on. Basically, the book is designed to help writers make informed choices.

One of my own choices was to make the book itself selective. Rather than cover everything in the field, I have focused on the essential elements of technical writing and those principles that apply to the significant problems of writing. To do otherwise would have produced a massive volume that would have smothered the essential points. For example, instead of listing the countless variations in the format and content of technical reports, I looked for basic principles that could be applied broadly. Nor did I include material on oral reports, statistical analysis, or other marginal subjects. All but two of the axioms refer to writing, and those two refer to graphics and research, vital elements in technical writing. In short, the emphasis here is on the process of writing: how to produce an effective report or paper.

Joseph A. Alvarez

Acknowledgements

A piece of writing springs from more roots than can be traced. This book is no exception. It has been shaped by my own education, by my experience as a professional writer and editor and writing instructor, and by the people I have known either personally or professionally. The people are too numerous to name individually, but I wish to single out one, Angus Cameron.

I also wish to thank my colleagues in the English and various technical departments of Santa Rosa Junior College; the staff of the College's Plover Library; and my editors at Harcourt Brace Jovanovich, particularly Matt Milán, Lee Shenkman, Richard Lewis, and Roberta Astroff. Their suggestions helped to improve the manuscript. I alone, however, am responsible for the opinions expressed and for any errors that remain.

Finally, I wish to thank my students. Without them, the book would not have been possible, and the last

eight years would not have been as exciting or rewarding.

I also owe a debt to other books. Those I have found most useful I have listed in the bibliography on page 135. From one of them, Strunk-White's The Elements of Style, I borrowed the device of using axioms in a short book, a format that has always appealed to me. In every other respect, however, the two books are different.

For me, writing has always been a way of learning. I started this book with a few key concepts and 63 specific axioms. As I wrote and learned, some concepts were recast or modified, and axioms were added or dropped, until only 50 remained. Looking back now, I realize how much I learned as I wrote this book, and I am more than ever conscious of all that still remains to be learned.

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