

Writing & Logic

GERALD LEVIN

Writing and Logic

G e r a l d L e v i n

The University of Akron



Harcourt Brace Jovanovich, Inc.

*New York • San Diego • Chicago • San Francisco • Atlanta
London • Sydney • Toronto*

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ISBN: 0-15-597788-1

Library of Congress Catalog Card Number: 81-85552

Printed in the United States of America

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Preface

Logic, the study of rational thinking, is an integral part of most writing. We try to organize our ideas and the expression of them rationally, for we wish to have our thoughts follow clearly from one another so that they can be understood and accepted by our readers. To achieve this goal, we need a method that will enable us to judge what we have written. Logic, joined with rhetoric, is that method.

The combination of logic and writing is not as unusual as it might at first appear. In classical times, the study of rhetoric included logic. Later, during the Renaissance, these subjects were separated, and logic was neglected in composition courses or was given only cursory attention. Today, we once again recognize that writing and logic need to be considered together.

This book presents logic and writing in a unified way. Many important topics of logic are discussed and throughout the book are related to the ways writings are organized and fitted to particular audiences. The exercises and writing assignments interspersed throughout each chapter give students practice in the important forms of exposition and argument and connect logical thinking to writing.

A special feature of the book is the series of detailed suggestions on prewriting and organizing the essay. The first two chapters provide a summary of basic ideas—topic sentence, thesis, paragraph development, writing and organizing expository and argumentative essays. The next three chapters consider matters of logic and audience. The sixth chapter focuses on language, especially as used in expository and argumentative

essays; the seventh chapter considers informal fallacies. The final chapter examines the methods of research and documentation, concentrating on a single subject to show how a topic may be studied in depth. Students are led gradually to a consideration of these research methods by first dealing with source materials in various writing assignments and exercises; these sources include advertisements, editorials, newspaper stories, and other material with which we can expect students to be familiar.

Writing and Logic also contains a large number of short illustrative excerpts. These are drawn from many areas—law, medicine, urban life, ecology, and education—to name a few. Twenty longer works are included as well, all of them models of the kinds of writing that are discussed. Most of the short excerpts and longer works show the way logic can be used in discursive writing; several of the essays are analyzed paragraph by paragraph in terms of their rhetorical and logical structures.

The three chapters devoted primarily to logic do not go beyond the elementary principles of correct reasoning. Indeed, advanced topics normally taken up in formal or symbolic logic have been avoided. The focus is rather on the syllogism and what the premises commit the writer to in deductive arguments, and on the uses and types of evidence that are acceptable in inductive ones. Here too several essays exemplify the processes of induction and deduction. How these kinds of reasoning are joined in particular writings is taken up in Chapter 5 on argument and audience.

Important recent developments in rhetoric and logic are reflected in the discussion of argument. Chapter 5 examines the methods advanced by Kenneth Burke and Carl Rogers for reaching agreement with an audience in persuasive discourse. Chaim Perelman's distinction between demonstration and argumentation, which has parallels in the logic of Stephen E. Toulmin, is maintained throughout. Though attention is given in Chapter 4 to contexts and warrants as developed by Toulmin and other logicians, the discussion of logic holds to the traditional distinction between deductive and inductive arguments.

This book has been conceived as a composition text and as a companion to a reader or handbook. Individual sections can be assigned as aids to the writing and revision of essays. Chapter 6 on language and Chapter 8 on the documented paper can be assigned earlier in the course if the instructor prefers. The Instructor's Manual includes discussions of the exercises, writing processes, and teaching suggestions for the subject of each chapter.

This, in brief, is the purpose and plan of the book. I hope that, instead of introducing logic as an occasional and independent consideration, composition teachers will be able to deal with the subject in some depth from the writer's perspective.

I want to thank my students and colleagues at the University of Akron who over many years have taught me much about writing. William Francis, Bruce Holland, Robert Holland, and Alice MacDonald helped me clarify my ideas on the teaching of writing and logic. I owe special thanks to Alan Hart and James C. Anderson, who discussed logic with me and gave me invaluable advice on several of the chapters. Louise Forsch, Bierce Library, University of Akron, was as indispensable as always. I also owe a special debt to Richard Fulkerson of East Texas State University and Bill Connelly of Middle Tennessee University, both of whom commented extensively on earlier drafts. Needless to say, the responsibility of the book is entirely mine.

Eben W. Ludlow, of Harcourt Brace Jovanovich, gave me the strongest possible encouragement and excellent advice at each stage of the planning and writing of the book. Those who have worked with him know his exceptional qualities of imagination and judgment. My editor, Sidney Zimmerman, improved the content and style of every page, and I am grateful for his patience and hard work. I thank finally my wife, Lillian Levin, to whom my debt is always great.

Gerald Levin

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Chapter One

Introduction: Writing Methods

Why we write

Writing is not the only way we communicate, but it is an important and common one. We write in answer to letters we receive. We write answers to exam questions. We write to explain our ideas or to communicate knowledge. We write to reason out a decision, and sometimes to persuade someone that our reasons are good ones.

Writing situations involve different purposes and circumstances, and these determine how we prepare for them. Sometimes we choose the occasion, as when we decide to justify a decision concerning college and persuade our parents to accept both the decision and our reasons for it. And sometimes others choose the occasion for us, as in a letter from a school official asking for information needed to renew a loan or scholarship. How much preparation we make—and what kind—depends on whether we choose to write or others ask us to.

When we choose to write, there is time to sort out thoughts and feelings and decide on an approach or strategy: deciding the best way of making our ideas clear, holding the attention of those we want to reach, and getting them to accept our viewpoint and reasons. At other times, as in examinations, we must gather our facts quickly. Usually, or ideally, answers to essay questions are short and to the point, but these too require organization and focus. For the most part, we write with a reader in mind, whether parent, school official, or some stranger who needs convincing, such as a possible employer.

The audiences we write for

Considering the audience for whom we write is crucial, although we probably give this matter little attention as a rule. In almost all circumstances we are concerned with our audience—with what it knows or believes, with what we want it to think or do.

Let us imagine an instance when a writer must consider an audience. An official of a chemical company, in writing to a newspaper, explains how a lake near the plant was polluted in an accident. This explanation probably will be less technical than another given in a letter to government officials responsible for monitoring chemical spills. Although readers of the news account will need a definition of terms and perhaps a description of the process that caused the spill, the writer will make a careful selection of details to avoid confusion. By contrast, government officials will probably not require either the definition of terms or the description, but they will need details on procedures and events leading to the spill—details that may require numerous pages of analysis and even diagrams. How much detail is included depends, then, on the view taken of the audience.

How we organize facts and ideas depends also on the audience. We may organize our ideas in several ways, proceeding from familiar and less controversial ideas to unfamiliar, more controversial ones. For a general audience of newspaper readers, we usually proceed from simple facts to complex ones. But for the special audience of government officials, we may decide to go from procedures of least concern to ones of greatest concern, to those that are in dispute. There are varying principles of order that we may use in organizing the discussion: we may proceed from the less interesting to the more interesting, or from the less to the more familiar. The organization will be determined by what the audience knows about the subject and what order of ideas will best convince them.

In organizing essays, we need to anticipate questions the audience will want answered. These help the writer to discover the facts and reasons that are needed to defend ideas. Here are a few that might be asked of the company official:

1. What was the nature of the chemical spill, and how did it resemble and differ from past spills?
2. What procedures are routinely followed to prevent spills?
3. Were these in effect at the time of the spill?
4. If not, what circumstances explain why they were not?
5. What other circumstances contributed to the accident?
6. Was the plant in compliance with federal standards and regulations? What are these standards and regulations?

7. What danger does the spill pose to people in the area and to the immediate environment?
8. What liability should the company accept for possible damage?
9. What new procedures or safeguards should be instituted to prevent future spills?
10. Are present standards, regulations, and procedures adequate?

The more a writer is able to include answers to these questions in writing, the more persuasive it will be. Readers will know that their interests and concerns are important to the writer.

Exercises

1. Answer the following questions about the advertisement on the opposite page. Cite evidence from the ad in support of your answer:
 - a. How technical is the definition of terms and the description of procedures or processes?
 - b. Is this definition and description designed for a general or a special audience? Is it directed to people in a particular region of the country?
 - c. What is the purpose of the ad? Is it concerned with a longstanding problem or a new and recent one? Does the ad state a purpose?
2. Examine a recent issue of a newspaper or magazine, and distinguish at least six pieces of writing (editorials, advertisements, letters to the editor, etc.) that inform, persuade, or amuse, or do some or all of these. Write down the evidence you find in each piece for the intention of the writer.

Writing Assignment

Choose a topic for a piece of writing of your own, and write brief answers to the following questions:

- a. What audience do I want to reach? Is it a general or a special one?
- b. What is my purpose in writing—to give information merely, or to give information that will change the thinking of the reader?
- c. What kind of organization will best serve my purpose?

Then write a short essay, fitting your organization to your audience and your purpose in writing.

Managing Chemical Wastes

What the chemical industry is doing to improve waste-disposal methods

America's chemical companies have already invested hundreds of millions of dollars in safer, better waste-disposal methods. We'll spend over \$2 billion more on waste-disposal facilities in the next two years. Here's how we're advancing the "state of the art":

1. Eliminating wasteful processes

We're redesigning manufacturing processes and improving efficiency. We're adding on-line treatment systems to neutralize, reduce in volume or change the nature of waste by-

products. We're also using recovery techniques that let us recycle wastes back into the production process. One company, for example, is salvaging phenol, used to manufacture plastics, pharmaceuticals and other useful products.

2. Building secure landfills

Secure landfills have a barrier that keeps wastes from seeping out into groundwater and keeps groundwater from migrating through the landfill. Other features may include facilities for recycling liquids or a wastewater treatment unit to clean up liquids for

safe disposal. Landfills—if properly designed, operated and monitored—are one of the best ways to dispose of many kinds of solid wastes.

3. Continuing industry commitment

We're finding ways to manage solid wastes long before the nation recognized the need for better waste-disposal methods. In fact, we already had much of the required waste-disposal technology and remedial strategies in place—or being developed—when Congress passed the Resource Conservation and Recovery Act of 1976, which sets forth strict waste-disposal guidelines.

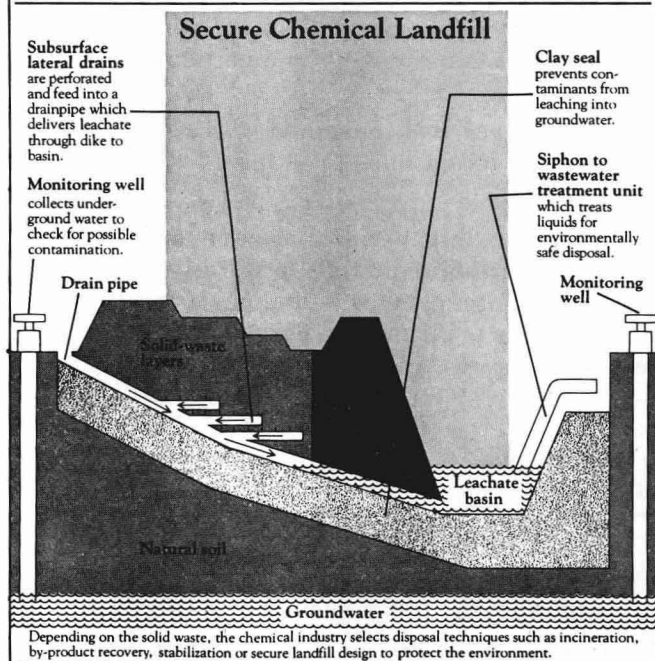
4. Sharing knowledge and new technology

As we develop new waste-disposal techniques, we share our knowledge with industry, government and the public. In 1979, we began conducting a series of regional seminars that presented current techniques for solid-waste disposal. Individual companies may use videotapes, visual aids or other techniques to train personnel in waste-disposal methods.

5. Encouraging solid-waste exchanges

Sometimes one chemical company's wastes can become another company's raw material. Fluoride wastes from a phosphoric acid plant, for example, can be used by a company producing aluminum. So the chemical industry has encouraged the development of waste-exchange organizations, which develop and distribute lists of available wastes.

For a booklet that tells more about what we're doing to protect the environment, write to: Chemical Manufacturers Association, Dept. HW-12, Box 363, Beltsville, MD 20705.



America's Chemical Industry

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