Introduction

In any form of communication, the message is paramount. Making it as easy as possible for your readers to grasp your message is what good writing is all about. Although you need to have a fairly clear idea about what your message is before you sit down to write, the process of elaborating a manuscript can you help clarify your ideas and hone your message. Clear writing reflects clear thinking, yet this clarity of thought is actually achieved through writing and especially through rewriting. Many people think that good writers have innate gifts that enable them to put thoughts on paper effortlessly. But the truth is, even the most talented and experienced writers need to work hard to write well, and several drafts are nearly always necessary to ensure that a text is well organized, coherent, and easily understood.

On the other hand, all scientists can learn to write competently. Writing is a skill; like other skills, it can be learned, improved, and refined. Skills are based on knowledge. You can acquire knowledge about scientific writing from reading extensively and critically in your field. Moreover, you can learn specific strategies for clear writing from expert writers and educators. But knowledge alone is not enough. Developing skills requires putting knowledge into practice. Whereas it useful to know the rules of usage and some guidelines about composition, it is only by applying them that you can hope to master them. In the end, the only way to learn to write is by writing and rewriting.

This book contains a variety of exercises to help you assimilate knowledge about the principles of good writing through controlled practice. I hope that the experience you gain in doing these exercises will help you to improve your skills in writing scientific English and to become a competent and confident communicator of your ideas. After a brief chapter outlining the importance of *Structure and organization,* we work toward a definition of the *Principles of scientific style.* The next part of the book deals with specific points of style, which are presented in four major sections. The first, *Precision: Avoiding ambiguity,* focuses on the importance of terminology and mechanics in ensuring that your message is understood. The second and third, *Simplicity: Avoiding unnecessary complexity* and *Concision: Making every word count,* highlight strategies to eliminate noise that can distract readers from your message. The fourth, *Fluidity: Keeping the thread,* deals with approaches to ensure coherence and cohesion to make it easier for readers to follow your arguments. A final chapter, *The overview,* underlines the importance of making sure that the trees do not impede your readers from seeing the forest.

This organization represents my attempt to impose order on the many points I consider important. Of course, many of these could be placed in two or more of the sections I have defined for this purpose. Indeed, the divisions are, to a certain degree, arbitrary, and the concepts dealt with in each section are interconnected and overlapping. Likewise, I have aimed for balanced coverage of the material, though inevitably different readers will find that the treatment given to certain topics is excessive while that given to others falls short of their expectations.

Each major section begins with a short explanatory text. Each subsection includes brief descriptions of principles or rules as well as illustrative examples followed by practical exercises. These exercises make up the core of the book. Do them after you read the texts or before you read the texts, in the order they appear in the book or in any order you choose, but do them—this is the only way you can truly benefit from them.

The final chapter contains a variety of exercises to give you additional practice in the points covered in the previous sections. Unlike the exercises in previous chapters, those in the final chapter are not limited to a specific point. These exercises aim to give you practice in recognizing all types of errors that can hinder communication. The book ends with 14 appendices containing material that can be consulted for help with the exercises, for self-study or revision, or even for guidance in writing up your own work.

A final word of advice: do not become frustrated with the intricacies and idiosyncrasies of the English language. Learning a foreign language is a lifelong task, and gains in your knowledge of general English may have little impact on your ability to write scientific English. Paradoxically, learning scientific writing in English can help you to improve your general English. Remember that your interlocutor, your readership, and your audience are interested in anything interesting you have to say. If you strive to overcome barriers to communication, you are sure to succeed.