

HEARING AND DEAFNESS

*An Introduction for Health and
Education Professionals*

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PREFACE

*A little learning is a dangerous thing;
Drink deep, or taste not the Pierian spring:
There shallow draughts intoxicate the brain,
And drinking largely sobers us again.*

—Alexander Pope, *An Essay on Criticism*

We, the authors, feel that it is appropriate and necessary to begin this preface with the timeless passage by Alexander Pope. Although reading and understanding this basic text, *Hearing and Deafness*, might be analogous to “a little learning,” we sincerely hope that the contents motivate you to do further reading and thinking, and perhaps a little research and writing on your own. For us, intensive and extensive “thinking, reading, and writing” clears much of the debris on the path to adequate knowledge. Occasionally, we drink “largely” and become “sober”; however, this is only an ephemeral state of mind. We admit that we have to continue the knowledge-seeking process to minimize the “intoxication” of limited understanding.

It is our experience that part of the intoxication, warned by Pope above, is due to misinformation and negative attitudes—indeed *stigmas*—associated with terms such as *speech* and *hearing*, especially for a number of professionals who work with d/Deaf or hard of hearing children, adolescents, and adults. We clearly do not mean to denigrate the dedication and accomplishments of our colleagues and those who will become our colleagues in deaf education or educational interpreting. We value and believe that there is a place for American Sign Language (ASL) and Deaf culture in the schools.

Specifically, for our colleagues and future colleagues in audiology, speech/language pathology, and otolaryngology, who may view hearing loss only from a disease/disorder perspective, it is our hope that this book provides a broader perspective of hearing loss for your consideration. The explosion of technology for people who are d/Deaf or hard of

hearing is exciting; however, one must be cautious of the old adage that “if your tool is a hammer, everything looks like a nail.” We hope that it becomes clear that there is no “one size fits all” approach to addressing hearing loss and that many aspects must be considered, including family dynamics, cultural issues, etiology of hearing loss, and educational options.

The crux of our contention is this: we have made considerable progress in our understanding of hearing and hearing-related technology that it is pertinent to explore and utilize the fruits of our labor with d/Deaf or hard of hearing individuals. Essentially, this means a collaborative approach among professionals to develop auditory, spoken, and written language abilities. We implore that you, the reader, do not misconstrue this as favoritism toward *oralism* and as antagonistic toward signing, ASL, or Deaf culture. Here’s one way to frame it: this is a basic text about the articulatory–auditory foundations of *hearing* for the development of English—both spoken and written.

Let’s proceed to the discussion of the contents of *Hearing and Deafness*. In Chapter 1, our introductory chapter, we provide background on the notion of hearing acuity and the importance of hearing and speech (especially for a language such as English). We attempt to create an integrative roadmap for the major constructs covered in this text; that is, we want to show how each chapter coheres or is related to the major theme of hearing with respect to development, technology, intervention, and professional collaboration. Also included is a brief rendition of our research and theoretical perspectives so that readers can understand our integrative conceptual framework. In essence, we present an overview on the impact of hearing on the development of speech, language, and literacy in English.

To render faithfully the articulatory–auditory foundations of hearing, it becomes relevant to discuss the anatomy and physiology of the auditory mechanism—the focus of Chapter 2. This also entails a discussion of the nature and perception of sounds and the nature of hearing impairment. Hopefully, our readers appreciate the efforts we expended in explaining a few of the concepts of sounds such as frequency, intensity, phase, and recruitment as well as types of impairment, such as conductive, sensorineural, and central.

After exposure to and understanding of the basic information in Chapter 2, the reader is ready to interpret and use an audiogram or, namely, to understand the essentials of a hearing screening and an audiologic evaluation—the purview of Chapter 3. Although we do not expect you to become a virtual audiologist (or even a real one!), we do expect an understanding of the relation of the audiogram to speech, language, and literacy development, to functional listening abilities, and to the decisions regarding appropriate technology options. After reading this chapter, we even anticipate that there might be a clearer picture of the value of hearing and the need to assess it at birth (i.e., universal newborn hearing screening) and periodically throughout life.

Having a solid understanding of an audiologic evaluation and the anatomy and physiology of the ear should provide a background for the later chapters in this book. Of course, the fun begins (well, for us anyway . . .) with the next two chapters on hearing aids, cochlear implants, and other amplification devices—Chapters 4 and 5. A number of breathtaking (and colorful!) advances have been made with digital hearing aids and cochlear implants, and this warrants adequate treatment for preservice (and, perhaps, inservice) professionals. Professionals such as teachers, educational interpreters, and speech-language pathol-

ogists should know the basics of how these devices work, including their limitations and benefits.

In general, educators and other professionals working with children, adolescents, and adults who are d/Deaf or hard of hearing might not have a strong grasp on how hearing development relates to speech, language, and reading development (of English). We attempt to shed some light (and hopefully not too much heat) on these interrelations in Chapters 6 and 7. Chapter 6 examines a range of topics, from the components and development of speech to those of language. We are confident that you will remember that speech does not equal language—among other tidbits of information.

In Chapter 1, we assert that phonology represents the building blocks of learning a language, especially a language based on sound. In Chapters 6 and 7, we demonstrate this principle and relate the component of phonology to the development of the other components of a spoken language such as English. Also, in Chapter 7, we introduce our readers to emerging perspectives on alternative techniques of developing phonological awareness, such as cued speech/language and visual phonics.

To put it in a nutshell, the rest of the book might best be viewed as an application of the contents in Chapters 2 through 7; albeit, we have certainly provided more information that should be useful and pertinent. The application aspect entails aural rehabilitation and intervention techniques as well as collaboration among professionals in schools and clinics. Chapter 8 focuses on the aural rehabilitation components of speechreading and auditory development (training/learning); Chapter 9 on the merits of early intervention; and Chapter 10 on interdisciplinary collaboration among professionals to enhance the development of children and adolescents.

We are aware that early intervention might be a hotly contested issue for some professionals, especially when the decision involves early amplification. Nevertheless, we feel that there is no more important issue, and we have little or no doubt that the growth and improvement in technology—discussed in Chapters 4 and 5—will minimize or resolve many of the conflicts associated with early identification and amplification. To paraphrase a popular news show in our area, it is critical to provide fair and balanced information in relation to how early intervention and educational options are delivered to families.

In Chapter 10, we argue that collaboration is a major key to success. Setting aside the politics of parity and power, we feel that professionals need to be willing to work together to ensure the most positive educational experience for the child. In short, we highlight that an interdisciplinary team approach entails the use of various ideas to provide the best outcomes for children and adolescents. We not only believe in the power and value of diversity—we celebrate it. Diverse viewpoints create a more productive framework for decision making. To put this succinctly: a diverse view is better than one view.

In the last chapter—the epilogue—we decided to have more fun by “summing up” briefly and presenting our view of the future. Nobody likes to know the ending to a good book ahead of time, so we shall spare you most of the details here. We do proffer a few recommendations for teacher education and clinical education programs in university settings. More important, we present an integrative view of our own perspectives about this controversial topic of *hearing* as it relates to *deafness*.

In closing, it is our desire that this book will inflame and inform your intellect—and that’s no exaggeration (albeit, it might be a good metaphor). If we can stretch your learning beyond “a little learning,” we can conclude that we have done our job. But, this little book should be a necessary first step of the long stairway. Perhaps, we can avoid a repeat of the situation described by Louise Tracy, who wrote the foreword to the first edition of *Hearing and Deafness* (Davis & Silverman, 1978) in August of 1947:

There is no other subject that vitally affects the lives of so many people on which there is so little positive information and so much fuzzy and widespread misinformation and misunderstanding. I doubt if over 5 percent of our population has ever read anything authentic on the deaf or the hard of hearing. And yet the impression that the deaf have no vocal cords and so cannot speak is wide-spread. It might surprise you to know how many people ask if the deaf learn to read Braille. (p. xiii)

Finally, we are indebted to all of the researchers and scholars who contributed the findings on which this book is based. We thank our reviewers for providing valuable comments on earlier versions of the manuscript, and we thank those persons who have contributed to the production and provision of photos in this book (acknowledgments are listed in the relevant places; specifically, we would like to acknowledge Landa McGinnis of *Cochlear Americas*, Maureen Doty-Tomasula of *Oticon*, and Brad Ingrao of *e-Audiology*). We appreciate the assistance of the staff at Jones and Bartlett—including their tolerance for the corny, eccentric humor of the first author via emails. Last, and certainly not least, we thank our spouses and family for bearing with our ups and downs throughout the intensive and extensive thinking, reading, and writing process for this book.



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