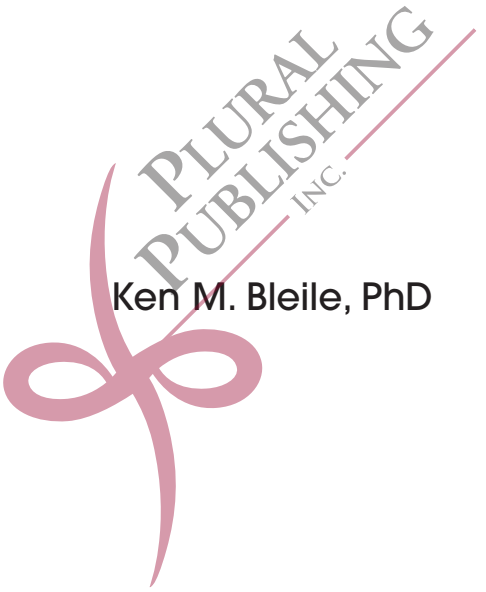
The Late Eight

Second Edition



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Preface

The first edition of *The Late Eight* was a book of all-purpose tools—the clinical equivalents of a carpenter's hammers, screwdrivers, bolts, paintbrushes, and ladder. The tools were designed to perform anything from an initial assessment to concluding a course of treatment, and were intended not to be "approach specific." Information on relative frequency or key environments, for example, is equally useful within a variety of phonological perspectives as in articulatory ones, or any other approach that might be developed.

This second edition of *The Late Eight* contains the same all-purpose clinical tools. Additionally, it describes how they may be employed within a specific clinical approach. To this purpose, the second edition contains a lengthy new chapter by Dr. Carlin Hageman outlining essential ideas about speech from a motor learning perspective. The DVD contains videos developed by Dr. Hageman that demonstrate aspects of a motor learning perspective.

Speech disorders in school-aged students deserve far more clinical and research attention than they presently receive. The second edition of *The Late Eight* furthers discussion of a newer and very exciting approach to the treatment of speech sound disorders in school-aged students. My hope is that future editions of the book will include more approaches, new and established, to help clinicians help students learn the verbal intricacies of the "late eight."

Ken Bleile
June, 2013

Chapter One

Overview

Introduction

Six percent of all school-aged children experience difficulty acquiring the eight late-acquired sounds, and fully 92% of school-based clinicians have students with such speech problems on their caseloads (Shewan, 1988). Furthermore, because "the late eight" are more likely than early acquired sounds to be missing from the speech inventories of other languages, they often present special difficulties to nonnative speakers. In large urban areas such as New York City, one in four adults reports having difficulty speaking English (Bernstein, 2005). Across the United States, approximately 18% of children speak a language other than English at home.

Because speech problems affecting late-acquired sounds are the world's most frequently encountered communication disorder, every speech-language pathologist who works with school-aged students or nonnative English speakers should know how to treat them effectively and efficiently. In the first decades of our profession, numerous books, articles, chapters, and seminars helped a professional gain this knowledge. In more recent decades the flow of information and ideas has diminished to a bare trickle. As our contestant observed, the reason for this lessened interest is not because the frequency of this disorder has declined. Rather, the number of persons affected is larger due to increased native and immigrant populations.

Decreased attention to problems affecting such a large number of persons may reflect a change in professional emphasis, which has shifted to meet clinical demands presented by seemingly ever younger and more disabled children. Needs of an otherwise typically developing student who experiences difficulty

saying a few late-acquired sounds are not often considered a high priority. Furthermore, a sense may exist among many professionals that ideas and materials to meet the needs of such a student were addressed long ago by Van Riper, McDonald, and other clinical pioneers (McDonald, 1964; Van Riper, 1978). Lastly, some have said (sometimes quietly, sometimes a little more loudly) that dealing with school-aged "artic" problems is simple and, well, boring.

Other Students Need Me More

School-aged students with "artic errors" as well as children and adults acquiring English as a nonnative language have needs that should not be marginalized. The numbers of such students is enormous and growing. Furthermore, although students with medical and extensive developmental needs demand clinical attention, one population of students should not be excluded for the sake of another. The sphere of clinical interests must include the entire range of students that are served, and a person should not be excluded from receiving service because of excellent potential for improvement. Furthermore, professional interest in children with more involved developmental needs does not preclude a similar interest in those on the other end of the severity continuum. Indeed, many clinicians find a balanced caseload is best, some with long-term developmental needs and others with more easily resolved problems.

All We Need to Know Was Written Long Ago

Nor is it the case everything needed to know to treat late-acquired sounds was written long ago. Although Van Riper's insights and those of other pioneers remain important and relevant, much has been learned in the intervening years, especially regarding language acquisition, second-language learning, inclusive practices, and motor learning. Ideas from those areas can and must shape and inform how a clinician thinks about treating late-acquired speech sounds. When these new ideas infuse clinical care, what a clinician does seems less like traditional articulation therapy and more like language therapy for speech disorders.

It's Simple

The belief that treating late-acquired sounds is simple may rise in part from an "artic" conception of speech disorders and partially from the organization of most university training programs. The first clinical experience of a student clinician typically is with a school-aged child with an error affecting a late-acquired sound, the rationale being that the procedures are straightforward "artic" and

the behavior problems are fewer than with younger children (most times). This gives students the impression—a false one, the author believes—that such care is simple. Instead, it would be truer to say a student with errors affecting late-acquired sounds often shows excellent potential to improve, but to help a student achieve success a clinician must master complex speech and language therapy techniques while negotiating some challenging human issues. In any given day, for example, a clinician may facilitate pronunciation of [s] during a phonologic awareness activity, facilitate a third-grader's pronunciation of [l] as part of a class assignment on animals, and discuss with a teenager why therapy for multiple speech problems is needed. A clinician who believes such tasks are simple either is extremely gifted or may not have experienced the full range of challenges encountered when working with students with errors affecting late-acquired sounds.

It's Boring

Lastly, treatment for "the late eight" should not be boring either for a clinician or for a student. It is not always fun, fun, fun—but what type of valuable therapy is always fun, fun, fun? It is challenging work, requiring a solid understanding of speech, language, cognition, and learning. And, as in all clinical domains, a clinician must wrestle with such human variables as a student's motivation, focus, and personality. Challenging and rewarding? Yes. Boring? Only as boring or as exciting as the concepts and enthusiasm brought to it.

Resources for the Late Eight

Resources described in this chapter include 14 "tools of the trade" used to evaluate and treat late-acquired sounds. They include:

1. Definition
2. Acquisition
3. Relative frequency
4. Errors
5. Key environments
6. Metaphors
7. Touch cues
8. Initial screening
9. Screening for stimulability
10. Demonstrations
11. Phonetic placement and shaping techniques

12. Exercises
13. Language activities
14. Word lists

The chapter concludes with a description of resources on the accompanying DVD.

> ***Warning!***
>
> This chapter provides necessary background for using the resources. Most of the information, though important, is fairly dry to read.

1. Definition

What It Is: The definition is a prose description showing how a sound is produced, or, as in the case of sounds such as [s], [z], and [r], the several different ways it may be produced.

Its Uses: Typical uses of the definition include:

- Making an informed decision about how to teach a sound
- Explaining how a sound is produced to a student and family

Illustration: This is the definition of [s]:

> [s] is made in either of two ways. Some people produce [s] with the tongue tip up behind the upper front teeth, others say it with the tongue tip down behind the lower front teeth. Neither one is the "right way." Follow a student's lead in deciding which way to teach [s]. If a student appears to find it easier to say [s] with the tongue tip up, teach the sound that way; if a student appears to find it easier to say [s] with the tongue tip down, teach the sound that way. For both varieties of [s], the airstream is continuous and the vocal folds are apart.

A brief technical definition of the sound is also provided. This is the technical definition of [s]:

> [s] is voiceless alveolar fricative.

2. Acquisition

What It Is: Acquisition data show the ages at which 50% and 75% of children acquire a sound.

Its Uses: Acquisition data are widely used for two purposes:

- Deciding if a student's delay in acquisition of a sound is sufficient to warrant therapy
- Selecting between possible treatment sounds (some clinicians choose to treat earlier acquired sounds before treating later acquired ones)

Illustration: This is the acquisition data for [tʃ]:

> 50% of children acquire [tʃ] by 4;6 and 75% of children acquire [tʃ] by 5;6.

3. Relative Frequency

What It Is: Relative frequency is the relative frequency of occurrence of a sound in the language. The data source for relative frequency is Shriberg and Kwiatkowski (1983). The information is for consonants; vocalic [r] is excluded from the calculations.

Its Use: A typical use of information on relative frequency includes:

- Evaluating the contribution of a possible treatment sound on intelligibility (sounds with higher relative frequency are presumed to have greater influence on intelligibility than those that occur less frequently)

Illustration: This is the relative frequency for [z]:

> [z] is ranked fifth in relative frequency compared to the other late-acquired consonants. It ranks 15th in relative frequency compared to all other English consonants, and its percentage of occurrence compared to all English consonants is 3.0%.

4. Errors

What It Is: This resource shows the speech errors a student is likely to make when unable to pronounce a sound.