A Review of Treiman, R. (1994). *Beginning to Spell*  

Donald Shankweiler†

Less is known about how people learn to write than about how they learn to read. Spelling is often downplayed in discussions of literacy. Reasons are not hard to find. In American society at large, even among those who teach, the spelling system of English is widely disparaged as so hopelessly irregular as to scarcely be worth the effort required to master it. Rebecca Treiman reminds us, however, that spelling is an important part of literacy. Just as fluent reading of words is critical to skillful reading comprehension, so learning to spell words is important for attaining fluency in writing. Treiman's book does much to fill the large gaps in our knowledge of how young children come to grips with English spelling. It is an important book for all who study literacy—psychologists, linguists, educators. With the call for more emphasis on writing during the early grades, this book contains much valuable information that could prepare teachers to respond intelligently to children's mistakes. It is also an important book for psycholinguistic researchers on child language for the insights and data it contains on how children represent the sound structure of their language at the onset of literacy.

Ironically, young children may be more willing to treat spelling as a system than many of their elders. We learn from this book that children in the first grade of an American, mid-western elementary school, long before they have been taught the intricacies of English spelling, and armed with only a rudimentary knowledge of the alphabet, display remarkable ingenuity and resourcefulness in inventing spellings for many of the words they used in writing stories. These spellings often do not conform to the standard system, to be sure. But when analyzed with the insight Treiman brings to the task, they become intelligible and are shown often to make good sense linguistically. A child who writes SGIE for *sky* is displaying acute phonological judgment by using the letter _g_, which usually represents an unaspirated velar stop, in preference to _k_, which commonly represents an aspirated velar. A child who writes AVR for *ever* is using the letter _a_ to represent a vowel that in fact is sometimes represented by that letter (as in *bare*). Moreover, this child has arguably not omitted the vowel in the second syllable, but has represented it by making the letter _r_ do double duty for both vowel and consonant. The letter's name would surely encourage just that error. The many interpreted examples in this book show that, to penetrate beneath the surface of children's spellings, one must look beyond the mere fact that a spelling is right or wrong. Instead, the questions become: Which of the word's phonemes are represented and how are they represented: which are omitted, and why?

Take an ordinary classroom of first graders in an ordinary public school. Give them a teacher who requires them to write regularly but who does not (at this stage) correct their spellings. If they are like the children Treiman studied, they will work intelligently to apply the alphabetic principle as they understand it. What the young writers most often capture in their spellings, Treiman argues, is their conceptions of the phonological structure of words. Frequently, the children generate much the same kinds of representations as the conventional orthography. Where the spellings are aberrant, these reflect the children's lack of experience, not totally wrong guesses about how the alphabet represents the language.

The idea that young children's spellings are chiefly an attempt to represent the phonological forms of words is the central theme of this book. Over and over, Treiman's findings demonstrate that, once past the earliest pre-alphabetic stage, children's spellings honor the alphabetic principle: they differ from conventional spellings because the structural representations of words in the children's mental lexicons are incomplete. and
because children at the beginning stages of reading and writing have very limited knowledge of the orthography’s resources. Experience in reading and writing will continue to shape their phonological representations.

The findings Treiman reports do much to dispel widespread misconceptions about the nature of spelling skill. The conventional wisdom holds that spelling is chiefly a visual memory task, learned passively and largely by rote. It is difficult to square these assumptions with many of Treiman’s findings. “At least three processes seem to be involved in spelling a word: analyzing the spoken word into smaller units, remembering the identity and order of the units, and assigning a grapheme to each unit” (p.280). The first process requires phonological awareness. Ultimately, the writer must appreciate that words come apart into phoneme segments. The second involves memory, but not primarily visual memory. Children must store the units in phonologic short-term memory while carrying out the other processes. They must remember both the identity of the units and their order. Finally, in order to transcribe each unit as a letter or group of letters, they must use their stored knowledge of the correspondences between phonemes and spellings. It is apparent from this conception of spelling that far more is involved than recall of visual shapes. Misspellings may reflect several linguistically-driven processes.

The insight that children’s early efforts to write often reveal penetrating attempts to represent the internal structure of words will be known to readers who are familiar with the literature on children’s invented spellings stemming from the researches of Carol Chomsky and Charles Read. The studies reported in this book build on their discoveries, particularly Read’s work. as Treiman notes repeatedly. Moreover, the research builds on the concept of phonological awareness, long recognized as critical for mastery of the alphabetic principle. This book presents some of the strongest evidence to date that skill in spelling, no less than in reading, rests on phoneme awareness. Even after a child apprehends that words come apart into segments. however. it may be difficult 10 apply this insight in all syllable contexts. Thus. the strong tendency of beginners to simplify consonant clusters, for example. spelling trap as TAP, may reflect the difficulty in apprehending the sound represented by r as an separable element of the word when it is part of a cluster.

The value of the book is enhanced by inclusion of a generous early portion devoted to theoretical background. With an eye to the needs of readers who are not trained in linguistic phonology., Treiman presents the linguistic concepts required to grasp and interpret the research findings. Although the book is apparently designed to be self-teaching, this material, and, indeed, the findings themselves, will no doubt be appreciated most by those who have already assimilated some of the background. Unfortunately, not everyone recognizes the need for specialized knowledge of phonology and other branches of linguistics and psycholinguistics as preparation for studying how people acquire basic literacy skills. Where language is concerned, it seems as though nearly every schooled adult regards himself or herself as already an expert. Treiman effectively counters this attitude by demonstrating how indispensable are certain linguistic concepts and tools for understanding how children arrive at the spellings they produce.

To summarize the book’s special strengths: First, its thoroughgoing linguistic approach, relating the problems of spelling to the phonological and morphological structures of the language and children’s apprehension of those structures. It assesses how children spell in an actual creative writing situation: Words are generated in the context of stories the children produce. The analysis of the data takes account of correct spellings as well as errors, so that it is possible to discover which types of words are easiest for beginners to spell correctly. Treiman’s database is more representative than Read’s: her subjects were from middle-class backgrounds and attended a public school. They were not children with a precocious interest in writing, and they did not come chiefly from the most highly-educated families. Some of the limitations of a naturalistic study are overcome by the inclusion of full discussions of the author’s earlier experimental work, which provided much of the empirical and theoretical framework for this book.

In a study of this kind, there are. unavoidably, some limitations. The data-collection method has drawbacks as well as virtues. as Treiman freely acknowledges. Perhaps the most serious drawback is that there is no control over the words attempted (and not attempted) by the children. Contributions to the corpus by different children were very unequal. On the whole, individual differences get short shrift in this book. We find little about possible effects of the child’s reading strategy. So, for example, we do not learn whether “logographic” readers have a discernibly different approach to spelling than “analytic” readers. Treiman does consider the important question of
how reading experience may influence spelling, but, as she notes, the materials she had available to her (the children's collected writings) did not allow her to investigate this question, nor could she study the possible influences of spelling on reading. For some of the questions considered in this book, a cross-language perspective could be helpful. One cannot easily sort out the separate contributions that language and orthography make to spelling difficulties without recourse to comparative data. Though it is packed with new content throughout, the book could have benefited from shortening. A certain amount of redundancy is guaranteed by the organization: Each chapter is self-contained, and each includes a detailed summary that includes recaps of portions of the theoretical argument.

Overall, Treiman's book is a major achievement in research on literacy acquisition. It yields a rich harvest of new findings, and confirmation of some important old ones. Indeed, this book has raised the study of spelling to a new level of conceptual and methodological sophistication. It will surely become the standard by which future work is judged for a long time to come.

FOOTNOTES
†Also University of Connecticut, Storrs.