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The *UNBEARABLE* Coolness of Phonemic Awareness

Stephen Krashen questions the value of a popular method used to teach young children how to read

Phonemic awareness (PA) now seems to be everywhere: There has been a sudden birth of a PA industry, with tests, materials, and consultants, and PA now dominates the research agenda of many literacy scholars. Teachers who had never heard of phonemic awareness until a few years ago are now being told that PA is absolutely necessary, that children must receive PA training in order to learn to read. What is PA and why is it so unbearably cool?

Phonemic awareness is an aural ability, the ability to divide a word into its component sounds. The idea that PA is necessary in order to learn to read makes perfect

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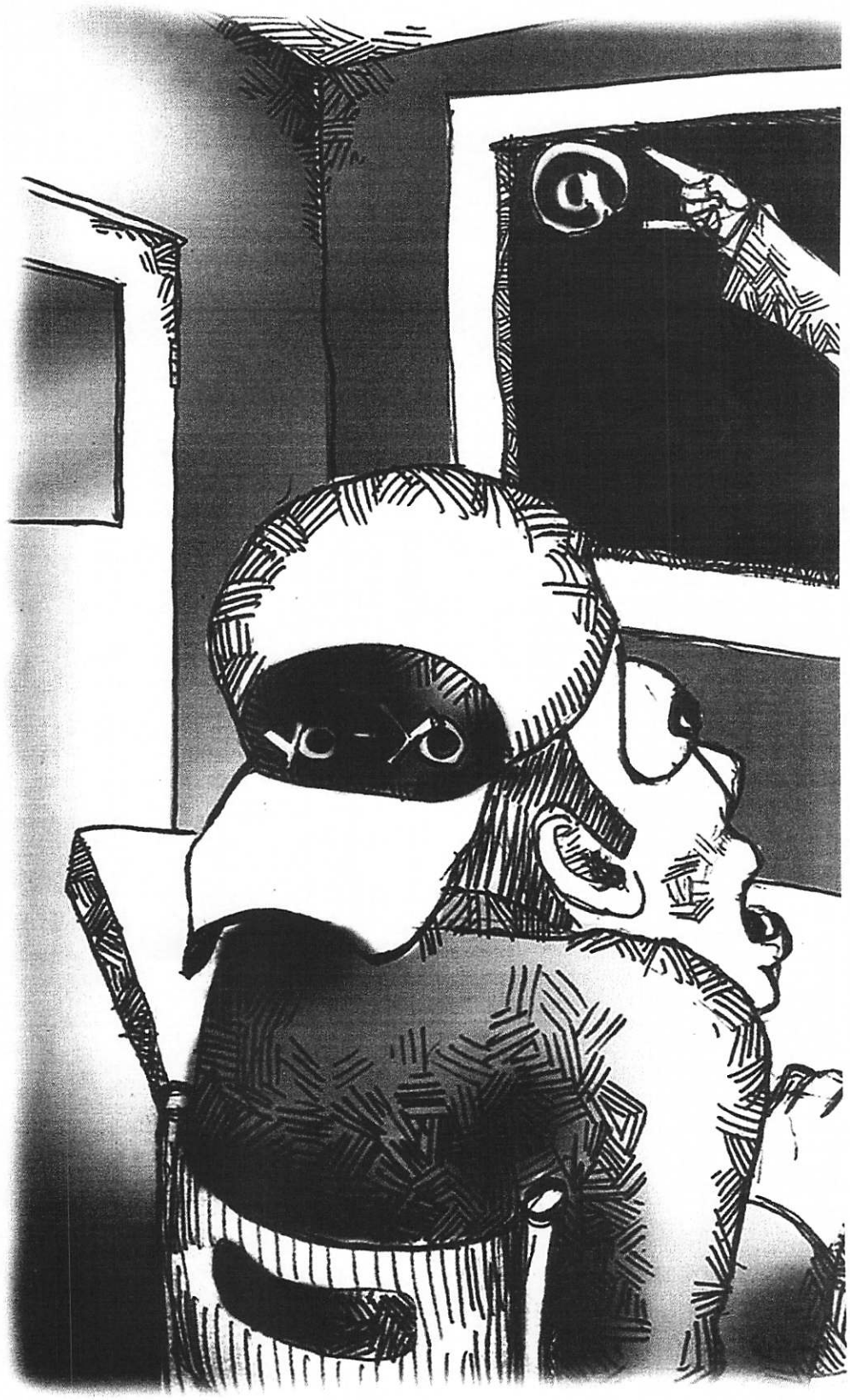
sense according to one view, the view that learning to read is the ability to read words out of context, isolated from texts. In order to read words out of context, it is assumed that one needs to first consciously master the rules for sound-spelling correspondences, or phonics. PA, it is argued, is the foundation skill for phonics. As Yatvin (2003) has pointed out, those in control of reading policy today assume the correctness of this view. For them, it is not a hypothesis but an axiom. PA training is usually done with very young children (kindergarten age and younger), and consists of activities in which children divide words into their sounds (segmentation) and combine sounds into words (blending). These activities are supplemented by the use of stories in which certain sounds are emphasized and songs in which certain sounds are repeated (see e.g. Yopp, 1992, 1995 for examples).

The Impact of PA Training on Reading Comprehension

Studies consistently show that children trained on PA show clear gains on tests of PA. There is little evidence, however, that PA training has much impact on reading comprehension. I recently reviewed this research in Krashen (2001a). The most amazing result was that I was only able to find six published studies (11 comparisons) comparing children trained in PA with children not trained in PA where the measure used was reading comprehension. Of the six studies, only three were done with children learning to read in English. Overall, the effect of PA training on reading comprehension was quite low, and in three studies it had no effect at all. I found only one study in which the impact of PA training was consistently strong and statistically significant, a study of 15 children learning to read in Hebrew in Israel (Kozminsky and Kozminsky, 1995).[1]

Learning to Read without PA

The weak impact of PA training on tests of reading comprehension casts serious doubt on the claim that PA training helps children learn to read. There is also reason to doubt the claim that PA, whether developed through training or developed without formal training, helps children learn to read. There are many recorded cases of children with low and even no PA learning to read. Bradley and Bryant (1985) reported that of a group of 316 children, 25 performed especially poorly on a test of PA (one standard deviation below their expected score, based on a test of verbal skills) at ages four and



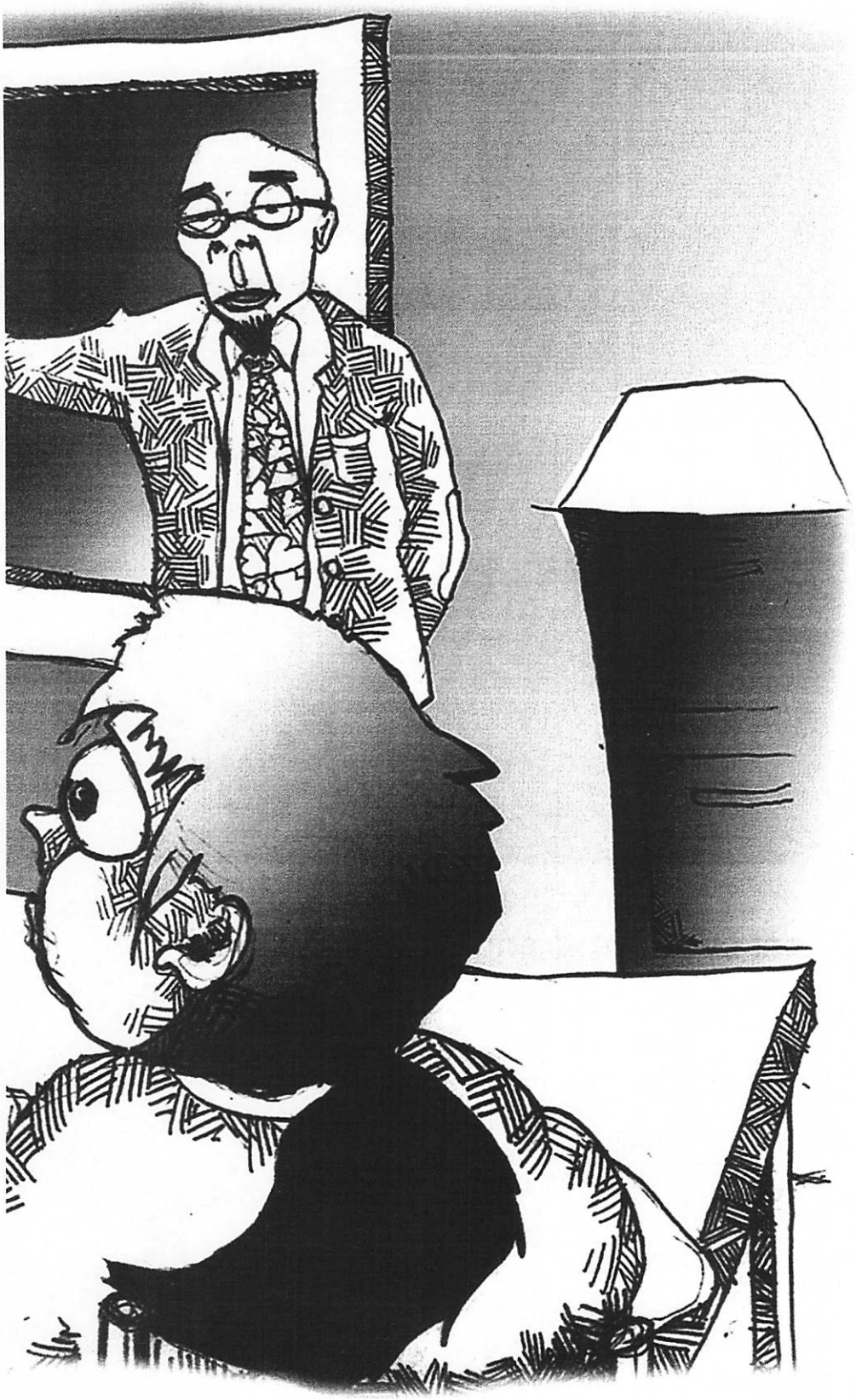


Illustration: Richard Ward

"The weak impact of PA training on tests of reading comprehension casts serious doubt on the claim that PA training helps children learn to read."

five. Of these, only seven turned out to be poor readers (scoring one standard deviation below their expected reading score, based on IQ) three years later. Thus, 72% of those with low PA were not delayed in learning to read. Stuart-Hamilton (1986) found that 20 five year old children who demonstrated zero phonemic awareness performed adequately on a word identification task, and were judged by their teachers to be making near-normal progress in learning to read. (For other studies, see Krashen, 2001b).

Also, some adults who are excellent readers do very poorly on tests of PA. R.E. (Campbell and Butterworth, 1985) graduated London University with second-class honors in psychology and performed above average on standardized tests of reading. She had great difficulty in reading nonsense words, and while she knew the names of all the letters, she had difficulty making the sounds corresponding to the letters. She also performed poorly on tests of phonemic awareness and phonemic segmentation, using orthographic instead of phonological strategies (for example, when counting the number of sounds in a word, she was influenced by the number of letters). Campbell and Butterworth conclude that "Since R.E.'s word reading and spelling are good, strong claims based on the necessity of a relationship between phonemic segmentation and manipulation skills, on the one hand, and the development of skilled reading and

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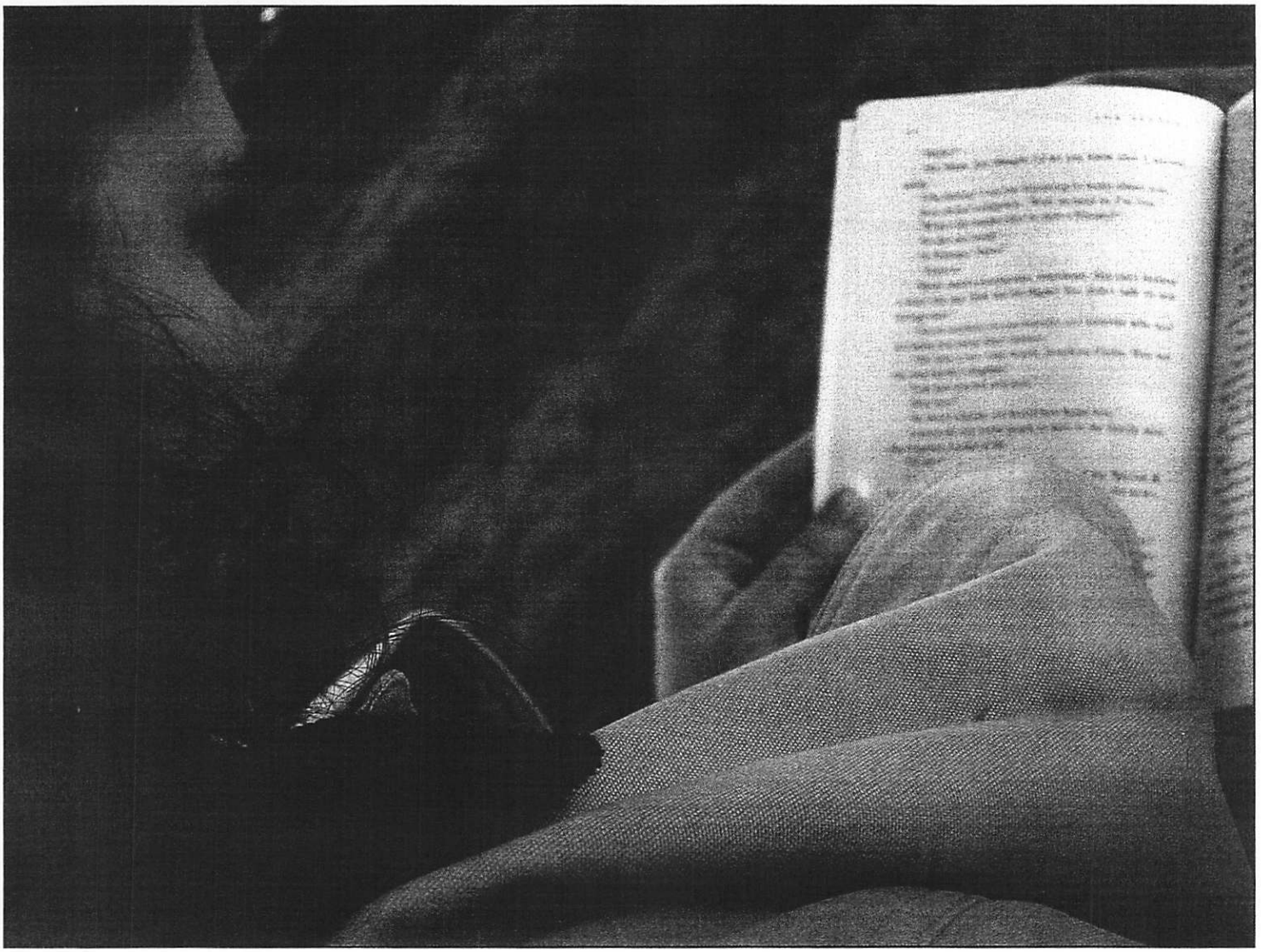

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writing, on the other, must be weakened" (p. 460). Additional studies of this kind are discussed in Krashen (2001b).

How is PA Developed?

The best hypothesis is that PA is not the cause of reading: Rather, the development of PA beyond the most basic levels is the result of reading. This conclusion is consistent with studies showing low levels of PA among adult illiterates (Morais, Bertelson, Cary and Algeria, 1986, Lukatela, Carello, Shankweiler, and Liberman, 1995). Evidence suggesting that reading experience alone, and not phonics instruction, may be the cause of PA comes from Foorman, Jenkins, and Francis (1993), who reported no difference in growth in PA during grade one between classes with more or less direct teaching of letter-sound correspondences, and Murray, Stahl, and and Ivey (1996), in which gains in PA were seen from storybook reading alone. Neuman (1999) presents evidence suggesting that readalouds contribute to the development of PA.

"Recent evidence strongly suggests that PA training is boring. If positive emotions enhance learning, and negative emotions hinder learning (Coles, 1998), this is a cause for concern."

I have informal evidence to add to this: I have asked a number of people to perform the classic PA task of stripping the initial sound from the word "pit," and pronouncing what is left over. Of course, everybody gets this right with no problem. Then I ask them to do the same with "split." After some hesitation, most people get it right. I then ask them how they did it. Universally, people report that they spelled the word in their mind's eye, removed the /p/ sound, and then read and pronounced the remainder. This confirms that the ability to do complex PA activities is dependent on the ability to read.

If PA is the result of reading, not the cause, the only deficit readers such as R.E. have is that reading has not resulted in substantial development of "skills" such as PA. Such readers may simply have problems in dealing with nonsense.

PA Training is Boring

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Castiglioni-Spalten and Ehri (2003) compared the effects of regular PA segmentation training ("ear treatment") and PA segmentation training that included instruction in articulatory gestures ("mouth treatment"). The control group had no special treatment. Castiglioni-Spalten and Ehri reported no difference among the two PA groups on segmentation tests and spelling, although both groups were better than the group that got no training, a familiar result: As noted earlier, PA training results in improved performance on tests of PA (but not necessarily reading).

Of interest here is the children's reactions to the training: In the pilot study, the experimenter recorded "several off-task and resistance behaviors committed by students: refusing to use the mirror (during articulation training); leaving their seats without permission; playing with blocks by building a tower, house, or train; throwing the blocks on the floor; talking about extraneous topics; interacting with others in the room; and expressing reluctance to finish the instruction" (p. 36). In the actual study, the experimenter had a "procedure for curbing such behaviors. When one occurred, she reminded students that she would be reporting back to their teacher about how well they did and surely they wanted a good report. In addition, a screen was positioned to isolate children from distractions in the room" (p. 36).

"Those who believe in skill-building find PA training irresistible, but there is little evidence that it is necessary or even helpful in teaching children to read. A review of the research provides little evidence that PA training has an impact on reading comprehension."

During the actual study, "the experimenter recorded instances of off-task and resistance behaviors ... However, students rarely committed such behaviors more than twice because the experimenter discouraged them" (p. 43). Castiglioni-Spalten and Ehri reported there was more disruption for the "ear" condition than the "mouth" condition but do not provide details, only the incredible statistic that 87% of the children in the ear condition "exhibited at least one of these behaviors such as playing with blocks by building a tower, house, or train" (p. 43).

The training sessions lasted only between 20 and 30 minutes, and there were only "three to six" of them. Despite the short treatments, these children were clearly bored.

Summary

Those who believe in skill-building find PA training irresistible, but there is little evidence that it is necessary or even helpful in teaching children to read. A review of the research provides little evidence that PA training has an impact on reading comprehension, and many children with low or zero PA appear to succeed in learning to read. PA appears to be a result of learning to read, not a cause. These results shed doubt on the position that children first need to master PA, then phonics, and then words in isolation.

Finally, although PA research may be unbearably cool for some researchers and policy makers, the results of at least one study suggest that PA training is unbearably boring for many children.

Note:

(1) For the statistically minded, the average effect size for PA training on reading comprehension was a modest .32, both according to my calculations as well as those of the National Reading Panel (2000). Members of the panel reacted to my claims of the limits of PA training in Ehri, Shanahan, and Nunes (2002). Ehri et. al. provided no additional studies, supporting my claim that few exist. In response to the finding that only three studies used English speaking subjects, Ehri et. al. reported that for the studies involving English-speaking subjects, the average effect size was .28, which they note falls short of statistical significance. They conclude that this "supports Krashen's claim" but add that "more comparisons would yield a firmer conclusion" (p. 129). Of course I agree. ■

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