Reviewed work:

English L2 Reading: Getting to the bottom. (2002). Barbara Birch. Mahwah: Lawrence Erlbaum Associates. Pp. 200. ISBN 0805838996. $19.95

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Influential theoretical accounts of L2 reading have stressed the interactive nature of top-down and bottom-up processing (Carrell, Devine & Eskey,1988; Bernhardt, 1991). In practice, as Birch argues in this book, bottom-up processing has been virtually ignored over the past two decades in the classroom, and for the most part in L2 research, in favor of a top-down approach that emphasizes activating learner schemata. Birch calls the consensus that has developed in the L2 classroom "whole language." That label is slightly misleading, in that it refers to a particular meaning-based approach used in L1 classrooms, while the consensus she is reacting to is found in EAP as well as in other mainstream ELT sites and materials. It is the model based on Goodman's 1967 "psycholinguistic guessing game" metaphor. Birch says she agrees with the goals of "whole language" and indeed it is hard to argue against a meaning-based approach that brings in students' life experiences. What she wants to do is expand our conception of what a reading classroom does to include work in bottom-up strategies. To do this, along with a sustained argument for such work, she offers the teacher-in-training the knowledge of linguistics necessary to teach in such a classroom. She does so by adopting what she terms "a fairly theory neutral information processing perspective" (p. x). She places herself in the context of what she calls "the growing emphasis on accuracy of form (along with meaning and use) as an important component of communication" (p. xii).

The book is divided into ten chapters. The first introduces her thesis by reviewing the literature and presenting a model of the bottom of the reading processor, which consists of four language processing strategies (syntactic, lexical, orthographic, phonological) mediating between language knowledge and text. She makes an argument from a stage-based perspective on reading development (Chall, 1983). This is somewhat unsatisfactory because she offers no proof that Chall's stages are necessarily those that L2 learners go through, but rather assumes they are similar processes. What Birch really is doing is arguing that consensus L2 reading instruction does not allow for complete development of reading skills because it drops the learner into the deep end, at Stage 3 or higher. Part of the problem seems to be that ELT teaching often assumes that reading ability progresses in lock step with improved language ability and we need to question whether that is indeed the case.

Birch in Chapter 2 discusses writing systems. She gives basic information about logographic, syllabic, and alphabetic systems, with examples. As part of her discussion of alphabetical systems, she contrasts transparent alphabets such as Greek and Spanish with opaque alphabets like English. This chapter serves to point out the mixed audience for this book. Most of this information on writing systems would have been included in an introductory linguistics textbook. I would expect the audience identified by the publisher ("ESL/EFL reading researchers, teacher trainers . . . teachers and . . . MATESOL students) to know it. The arguments in Chapter 4 (with phonetics) and 8 (with morphology) are similarly interrupted.

Chapter 3 is more successfully focused on the issue at hand: "low-level transfer." The purpose of this chapter is to review some research on how readers process different scripts. This is an area that needs more research, but Birch does a good job summarizing some key studies that say there are indeed different processing strategies for different scripts and L2 readers may experience negative transfer and thus difficulties in reading in a script unlike that of L1. Birch also introduces in this chapter four representative L2 learners who serve to personalize her findings. She comes back in later chapters to each one to review what her conclusions imply for teaching that learner. This is a good pedagogical device.

Chapters 4 and 5 are at the heart of the book. They present the core of Birch's argument that L2 reading class should include teaching of and practice in sound-symbol correspondences. Chapter 4 argues that learners of English need to develop the ability to discriminate new sounds. They need not produce these new sounds to native speaker criterion, and Birch sensibly warns against oral reading used as a pronunciation-testing or comprehension-checking device. L2 learners need to develop the ability to discriminate sounds and segment words into component sounds in order to read quickly and efficiently, as well as to sound out new words. Speakers of different languages will need different amounts of training in these skills. This is clearly an area for much more research. Birch implies that learners are effortlessly able to learn, at least receptively, and store sound patterns not found in L1. Would that it were so, wonderful if it's true, but I don't think we know much about this ability. Chapter 5 makes an explicit argument that L2 readers cannot just sample the text in order to confirm expectations that arise out of their schemata. Birch presents evidence from studies of saccades and eye fixations, the movements of eyes during reading, to show that all readers in fact focus quite a bit on the text. Better readers focus more efficiently, taking in wider sweeps and using shorter fixations. Less proficient readers, in L1 and L2, fixate longer on words, showing that they are taking more time to process each word. Though I would not say that Birch overstates her case, it needs to be said in fairness that there are very few studies of eye movements of L2 and many ways (including developing a large sight vocabulary) to make reading more efficient that have nothing to do with phonemic awareness. Both chapters include suggestions for teaching L2 learners sound-symbol correspondences.

Chapters 6 and 7 finally use the word "phonics" much more prominently. It remains a controversial word, partly because of the sometime mindless teaching techniques associated with it. Birch's central point in Chapter 6 is that while English spelling is irregular, it is not chaotic. There are regularities that we can make use of through "probabilistic reasoning" that will allow us to better use the system. Birch makes a distinction between reading rules and spelling rules. When reading, we know that both graphemes "b" and "bb" correspond to the phoneme /b/. The rule is easy to apply. When spelling, however, we start with /b/ and may have a hard time

deciding on "b" or "bb." English L1 readers make use of the knowledge that certain consonant correspondences are predictable. L2 readers need to be alerted to this process of probabilistic reasoning. Birch models how a lesson might be structured to develop this form of reasoning in learners. She is quite flexible, and shows how both inductive and deductive presentations might work, and how a variety of practice types could be utilized, including Language Experience Approach activities and games. Birch takes care in these chapters to disassociate phonics from memorizing rules and reading meaningless sentences. Chapter 7 presents a frame-based approach to phonics instruction in which learners learn to recognize and use about one hundred common sound-symbol correspondences based on rhymes and bound morphemes. Birch says that by using rhymes and probabilistic reasoning, learners can more easily access the less regular vowel sounds. Thus, *--at* yields *at, bat, cat, chat*, etc.

Chapter 8 provides basic material on morphology and Birch points to the usefulness of teaching derivational morphology. She cites research that students do not use morphological strategies even when they know them, but maintains the usefulness of morphological knowledge, particularly given that many of the small dictionaries learners carry do not contain all the derivations of a word. The chapter also spends a considerable amount of space on the morphological typology of languages (isolating, agglutinating, etc.)

Vocabulary acquisition is the theme of Chapter 9. Birch argues that texts frequently do not have enough context to allow for guessing the meanings of unknown words, so that students need to improve their lower-level processing skills in order to break down such words. She also advocates teaching vocabulary in reading class. (For a more complete review of the issues in incidental vocabulary acquisition, see Huckin & Coady, 1999).

The book ends with a short summary in Chapter 10 calling for a "balanced" view of reading and a warning that we may be rushing learners into reading. Using the analogy of a "silent period" in speaking, Birch says that learners need time to develop automaticity with graphemes and spelling patterns. There are two appendices that list sound-symbol correspondences in both directions (sound to symbol and symbol to sound) and a workbook supplement that allows practice with some of the linguistic concepts introduced.

As I have noted, Birch sees her book as theory neutral. I think it supports a particular theory that L2 researchers should be taking more seriously, Just and Carpenter's Capacity Theory, which attributes individual differences in reading comprehension to working memory differences. One thing effective use of lower-level processing strategies does is to reduce working memory demands, thereby facilitating comprehension. (Just & Carpenter, 1992; Brown, 1998).

David Eskey is quoted on the back cover of this book saying, "There is simply nothing like it." That is sadly true, though Koda's 1994 overview article remains a good place to start MA students thinking about these issues. The book's uniqueness is also its undoing. Birch has so many audiences that she gets sidetracked. The material on basic linguistics could have been removed to make room for a broader review of the research literature, for example. As it stands, the book cannot serve the beginning researcher as a complete overview of L2 lower-level processing research. However, Birch has provided a service by, and should be commended for, raising what I think is a very important issue in L2 reading. Let us hope that her work will inspire

others to fill in the gaps in the research that at times leave her arguments (through no fault of her own) unsupported.

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