

**REVIEW ESSAY**

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A Review of *Language Two* by Heidi Dulay, Marina Burt, and Stephen Krashen. New York: Oxford University Press, 1982. 315 pp.

In *Language Two*, Dulay, Burt, and Krashen have produced a synthesis of what they consider to be the state-of-the-art knowledge about second language acquisition and learning. The authors are well known within the profession and the book will undoubtedly be widely read and quoted. Without hesitation I recommend that it be read by the profession. In this review, however, I will also demonstrate why the book should be quoted with some caution. First, I will summarize the main points of the book, make a few critical comments, and then conclude by outlining aspects of an alternative line of L2 research.

The authors of *Language Two* begin with a somewhat immodest and implausible claim that teaching methods have been developed largely without research-based knowledge, since "much of what we know about the way people learn languages has been discovered only in the past twenty years" (p. 8). This research has shown that "the learner's contribution to the whole learning process has been highly underestimated," while a knowledge of these contributions is said to help improve current teaching practices. The authors say that they will concentrate on "natural learning processes" and that they believe that such information will help teachers understand "why students perform well or badly, or in an unexpected manner, and that it should provide an explanation to people who still cannot engage in a foreign language conversation after years in a language class" (p. 8). The authors state as their purpose to present "the exciting findings of the last decade in greater detail together with their teaching implications" (p. 8). They also say that their guidelines to teachers are based on "basic" rather than "applied" research studies. Basic studies are defined as focusing on how learning takes place rather than on the evaluation of teaching techniques. "They describe how learners behave, react and think in various learning situations" (p. 261).

The reader will soon discover Dulay, Burt, and Krashen do, in fact, follow the agenda they set for themselves in the "Purpose" section. Earlier

research and writing on foreign language learning is totally neglected or quoted very selectively. Also, the scope of the research discussed is, for the most part, limited to the "morpheme" studies. Thus, the book does not go very far in addressing what one might expect from its comprehensive title. A more informative title would have been, for instance, "What We Can Learn From Studies in the Acquisition of the First Grammatical Morphemes: Extrapolations and a Personal View." Readers with a better command of the English idiom might be able to come up with a shorter title. It would not be surprising if some readers were baffled and disappointed when the book did not deliver what its title seemed to promise. Before discussing other problematic aspects of the book, I will give a brief summary of its main points.

*Language Two* sets out to present a systematic account of how "creative construction" (p. 11) operates in L2 acquisition. According to this view, the learner's verbal performance is affected by an interaction between language environment and the learner's internal processing mechanisms. This is illustrated in Figure 1.

As the figure indicates, the *filter* acts as a screen of language input from the language environment and, if the focus is on communicating meaning, the intake is then processed subconsciously by the *organizer*. The organizer is responsible for the learner's gradual organization of the new language system. If the focus is on form, the *monitor* undertakes conscious linguistic processing and makes it possible for learners to consciously produce, correct, and edit utterances. These three basic internal processes are affected by the learner's *age* (cognitive maturity) and *personality*, and these tend either to inhibit or enhance processing. The learner's *first language* is also assumed to have some, although minor, effect on the innate learning processors.

Dulay, Burt, and Krashen claim that language performance is enhanced when learners are exposed to natural language input, preferably from peers or members of the same ethnic group, when focus is on meaning (not on linguistic form) and on comprehensible concrete referents (here-and-now) and when learners are not forced to speak before they are inclined (ready) to do so (a "silent" period). Such characteristics produce a favorable *macro-environment*. On the other hand, the salience and frequency of language items and the correction of errors, which have often been assumed to be favorable features of the linguistics *micro-environment*, are said to be of questionable value. "Correction of

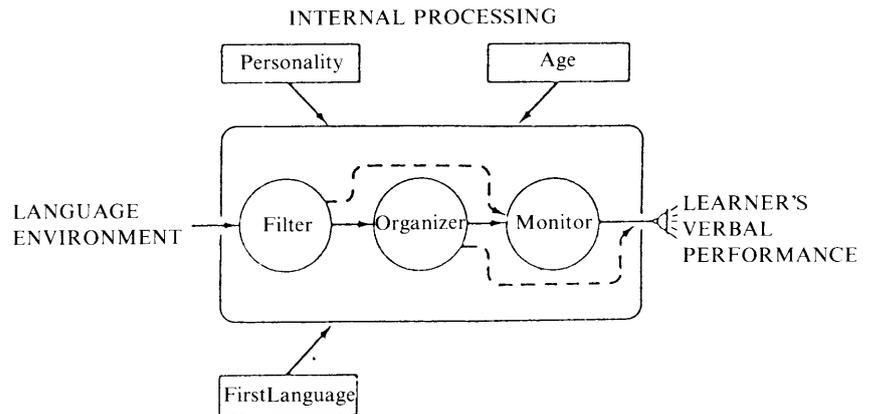


Figure 1. (From Dulay, Burt, and Krashen 1982:6)

grammatical errors does *not* [emphasis in the original] help students avoid them" (p. 263).

As regards *personality* factors, Dulay, Burt, and Krashen say that motivation (whether integrative, instrumental, or social group identification) does not seem to make as much difference in filtering as was assumed earlier, when the integrative motive was thought to be the most conducive to language learning. Intensity of motivation is said to be more important. Also, relaxed and self-confident learners are believed to do both less filtering and less monitoring, and thus learn faster.

With regard to *age*, the authors note that when the learners have reached the stage of formal operations (Piaget), they appear to engage more in monitoring, i.e., in conscious learning of linguistic rules and extracting of linguistic patterns. Similarly, if the task requires manipulation of linguistic forms or translation, conscious monitoring is said to be preferred.

Dulay, Burt, and Krashen give a great deal of attention to the functioning of the Organizer (chapter 3) and consider basic research in this area the most exciting to have been carried out in the 1970s. The basic thesis is that the outcome of the organizer is very much the same in the acquisition of both L1 and L2. This is assumed to be due to the structure of the human brain. Thus, the interim, transitional constructions that learners use before they acquire a given structure are similar in L1 and L2 acquisition. The same is said to be true of the types of errors made and of the order in which certain basic structures of L1 and L2 are acquired. L1

has only a minor effect on L2 acquisition. What impact it does have is most evident in phonology and most pronounced among adults. Therefore, Dulay, Burt, and Krashen assert that the assumptions of early contrastive analysis concerning negative transfer (interference of L1) and positive transfer (facilitation) are largely unwarranted. Borrowing and code switching, rather than showing the intrusion of L1 due to imperfect mastery of language, are indexes of high language competence and are used for specific purposes in social interaction.

The authors also devote some attention to "special constructions" (chapter 2), called routines and patterns, which are unanalyzed stretches of language (formulas) distinct from rule-governed aspects of language. They typically occur in response to immediate social situations.

The authors also discuss some aspects of research design (longitudinal vs. cross-sectional studies), language elicitation methods (structured and unstructured natural communication tasks vs. linguistic manipulation tasks), and methods of determining the overall level of L2 development (chapter 10). The book concludes with teaching guidelines supposedly derived from the findings and from the model of L2 acquisition (chapter 11).

The clarity of exposition is exemplary and can serve as a model for this kind of writing. A good example of this is the authors' summary of the major points made in the book (pp. 261-263). Similarly, their teaching guidelines (pp. 263-269) are clearly formulated. Thus, *Language Two* has considerable merits (clarity of exposition, extensive coverage of literature on the acquisition of the first grammatical forms and errors in that process, and an attempt to build a consistent theory of L2 acquisition). These deserve to be recognized and applauded. Unfortunately, there are also a number of problems with the book. Since it would require more space than is available here to deal with all of them, I will mention only a few. These can be classified as problematic assumptions, problematic claims, problematic uses of the literature (mainly omissions), and problematic methodological procedures.

### **Problematic Assumptions**

*Language Two* contains a number of assumptions which the authors take as givens but which ought at the very least to be regarded only as alternatives or as problematic solutions that deserve to be discussed

seriously. Among the most important unstated assumptions are the following.

First, the authors assume that the “real” purpose of L2 teaching is oral communication skills to cope with face-to-face situations of conversational interaction. As far as I can see, that is what is so often labeled as being the “natural” way or approach to language. This value-laden term implies that such language skills are clearly more desirable and valuable than other uses of language. Several studies of language needs carried out in a number of countries have shown that the skill people need most after high school is a good reading knowledge of a second or foreign language. Conversational skills are useful but so are other language skills. There is no reason, in principle, why oral interaction skills should be accorded the status of being “natural” and why success in that area should be the ultimate criterion of second language teaching and learning.

Second, the authors assume that there is a sharp dichotomy between two levels of consciousness: The Organizer processes language data and arrives at rules in a totally subconscious way when the exposure to language is “natural” with focus on meaning, whereas the Monitor operates when the focus is on the acquisition of rules and norms (formal exposure). There is, however, no reason to assume that there are only two levels of consciousness which are not even on speaking terms with one another. Thus, for instance, in Soviet psychology and psycholinguistics (e.g., Leontev 1975) it is assumed that there are at least four levels of consciousness: current (focal) awareness, conscious control, unconscious control, and nonconsciousness. *Any* aspect of language can be the object of focal awareness, depending on the situation, the context, and the task. Also, the levels are very much on speaking terms with each other: Elements and units of verbal thought and utterance can fluctuate between all four levels, depending on the motives and goals of a person’s activity. One would have thought that there is enough evidence in several disciplines to serve as a warning against positing such a strict dichotomy. “Both . . . and” is usually a more reasonable assumption than “either . . . or” (see, for instance, Carroll 1971).

Third, the authors assume that there should be as close a resemblance as possible between out-of-school language acquisition and in-school language acquisition. Thus, for instance, since children often have a silent period before they start using the L2 in a foreign environment, such a silent period ought to be introduced into classroom teaching. Out-of-school

language acquisition is “natural” and therefore worth emulating. This assumption is held by several other researchers in other disciplines (for instance, writing instruction and research). This begs the question, Why should we have schools in the first place if “natural life” is so effective and efficient that it should be taken as a model? Why not just let everybody attend the “school of life”? It is seldom asked whether the reverse might be the case: The schools’ justification and strength may lie just in the fact that they do not imitate “natural life” but do many things in a different way. It might even be claimed that the classroom is a unique environment and that teaching and learning in a classroom setting should begin from its unique strengths, pay attention to its inherent limitations, and derive a program of activities on the basis of such an analysis, rather than uncritically try to borrow activities from the “natural” environment.

### **Problematic Claims**

*Language Two* makes several questionable claims, two of which will be dealt with here. One pertains to the alleged superiority of children as language acquirers, the other is related to language transfer.

The authors state that the “belief that children are better at language acquisition than adults is supported by both scientific and anecdotal evidence” (p. 78). In comparing the relative effectiveness of children and adults in learning L2 morphology and syntax, the authors state, however, that adults seem to progress faster, especially in the very early stages (p. 84). They advance biological factors (development of cerebral dominance), cognitive factors (more mature cognitive system including meta-awareness of language), and differences in language environment as possible reasons for early advantage for adults but later superiority by children who acquire the new language system unconsciously. Affective factors are said to have a “reverse” effect due to adults’ heightened self-consciousness.

Let us try to analyze this claim in some detail and see to what extent there is evidence to support the statement that adults may be more rapid in acquiring an L2 in the beginning but that, ultimately, children surpass them.

The very thesis, often stated and strongly supported by the authors, that children are exceptionally good at language acquisition should be subjected to a critical analysis. Is it really so if we take *engaged time* into account? Several scholars have addressed the adult-child superiority issue,

but let us just quote Jakobovits (1968) since he qualifies as having worked during the exciting past twenty years when there has been “real” scientific work done in this area. Jakobovits estimated that a child spends some 3000 hours on learning the basic structures of L1 and is then 3.5 to 4 years old. His vocabulary is then about 1500 to 2500 words according to several studies. Is this so remarkable? Students in school settings usually have two to four lessons a week and altogether only a few hundred hours of contact with a second or foreign language (e.g., Carroll 1975; Lewis and Massad 1975). Thus, for instance, in the Finnish comprehensive school most of the students who study English have about 450 clock hours in the classroom to cover the basic grammar and be exposed to some 2000 words. The present author estimated that he developed an active vocabulary of about 10,000 English words in three years from age 15 to 18, spending some 700 to 900 hours on the task (and learning about the same number of Swedish words, some 1500 to 2000 German words, and about 800 to 1000 Latin words as well as the basic grammar of all these languages). Research carried out by the present writer and his colleagues in the Finnish comprehensive school in the early 1970s showed that older students who had studied three years of English (total number of lessons about 225 clock hours, from age 14 to 16) learned about the same amount of English in half the time as students who had read English seven years but started younger (total number of lessons about 450 clock hours, from age 9 to 16). This finding has been replicated several times. The tests covered reading and listening comprehension, grammar, and vocabulary. Similar results have been obtained in several other countries (e.g., Burstall et al. 1974; Carroll 1975; Kaulfers 1951; Lewis and Massad 1975).

There are a number of reasons why a young child and an adult may have very different ratios of time engaged in L2 activities when they find themselves in an L2 environment. A young child may often be in a highly L2-saturated environment (L2 accompanies other activities), whereas an adult may spend time in keeping in touch with L1 through reading and writing, or he or she may be doing physical work which is not accompanied by any language, or, if it is, this may be covert verbal thought in L1. Another related factor may be the effect of school: School is a verbal environment par excellence. It is a talking, reading, speaking, and writing shop. The younger the child comes to a foreign environment, the longer he or she will be participating in this language-saturated environment, receiving regular instruction not only via L2 but also on L2. School and the peer group reward nonnative speakers (and also speakers of nonstandard

“dialect”) for approximating the norms of their variety of L2 and expect such approximation, whereas few people outside of a school setting would presume to expect that a foreign adult should stop sounding “funny.” Adults are allowed choices whereas children and youth are captive audiences for “socialization,” including language socialization, by peers and by the school.

Thus, before any claims are made about children learning the syntax of L2 faster after the initial period is over, there should be a careful control of time actually engaged in L2 use, internal as well as external (covert as well as overt). It is *not* enough to account only for length of residence in a foreign environment. That may be a seriously biased proxy for actual engaged time. It should be known what proportion of that time is actually devoted to active cognitive contact with L2. After all, in physics, rate is measured by dividing distance by time; rate in L2 learning/acquisition should be measured by relating level of proficiency to *amount of time engaged in specifically L2 activity*. This method should be used not only in studying the rate of learning in the early stages but should be applied across the board. Similarly, it would probably also be necessary to control the degree of reinforcement that children and adults receive from the environment. Thus, it can be conjectured that for most young learners of L2 in a foreign environment there are certain social pressures and rewards that induce them to engage frequently in L2 activity and do so as well as they can. Thus, children may be “performing at the level of their capacity,” whereas adults may only be operating at the level that they choose to be satisfied with. This may be far removed from their capacity, as Suggestopaedia and other forms of intensive L2 teaching have purported to show (e.g., Leontev 1981). As far as I can judge, Dulay, Burt, and Krashen do not clearly indicate whether their domain of discourse refers to what children and adults *can* do or what they *will* do.

Let us now take up personality traits as explanatory factors. On page 75, the authors state that “self-confident people . . . are likely to put themselves in learning situations and to do this *repeatedly*” [emphasis added]. The implications of this interesting observation are not developed further. What does the statement imply? Implicit in it is the notion that “passive” personality traits as such do not explain anything. It is through engaged cognitive *activity* (covert and overt) that learning takes place and personality traits may only be *correlated* with degree of language activity. They do not *explain* language acquisition and learning in any real sense of the word. Thus, in terms of the standard statistical method of path

analysis, personality factors are not likely to have a direct causal link with language performance. Their effect is more likely to be mediated by the degree and type of engaged cognitive activity. It would, therefore, seem to be more important to study the relationship between various personality factors and cognitive activity than the link between personality factors and language performance. If we knew more about the former relationship, we might be able to foster L2 learning and acquisition not only *thanks to* but also *in spite of* personality factors.

Before leaving this topic, it is worth pointing out that there is an extensive body of literature on the effect that various factors have on learning outcomes. Constructs such as opportunity to learn (OTL), time on task (TOT), or engaged time are among the most important factors (e.g., Rosenshine, in press). There is no reason why they should not be important in L2 acquisition and learning as well.

The other problematic claim in *Language Two* is related to transfer. The authors maintain that there is little significant transfer (the effect of previous knowledge on a new learning situation) and that there exists only a behaviorist explanation of this phenomenon (p. 101). Both claims are inaccurate. There exists a sizable body of literature in cognitive psychology—going back to Binet at the turn of the century and to Bartlett in the 1930s, not to mention the wealth of recent work in schema theory—about the positive and interfering effect of earlier knowledge, expectations, and point of view (including cross-cultural differences) on the encoding, storage, and retrieval of verbal information.

It should not be assumed that L2 would not benefit from what is being done in such neighboring fields nor should it be assumed that psychological research remains in its behavioristic stage (for a relevant discussion of such assumptions and using labeling—“behavioristic”—as a method of avoiding the trouble of getting acquainted with potentially relevant literature and making a critical analysis of a problem, see Carroll 1971).

### **Problematic Omissions**

One of the most puzzling and worrisome features of *Language Two* is that in spite of its concern in building a general theory of L2 acquisition, it almost totally neglects the vast amount of work done in cognitive psychology on memory, cognitive processes, metacognitive strategies, schema theory. Such work is neglected at a heavy cost.

Another puzzle is that work done in some other language areas is also almost totally neglected. What message is being conveyed to the profession and what credibility can be claimed for statements concerning the importance of bilingual education, foreign language teaching and learning in some parts of the world, when L2 theorists only cite material published in L1 and even that selectively in terms of the historical and geographical dimensions? To illustrate this, I believe that the L2 profession suffers when work done in countries such as Belgium, the Netherlands, and the Soviet Union is not considered in syntheses. Vygotsky's classic work *Language and Thought* (originally published in 1934 and in English translation in 1962) contains insightful views on L1 acquisition and a section on L2 learning, much of which is diametrically opposed to the view suggested in *Language Two*. Similarly, the very comprehensive psycholinguistic theory of A. A. Leontev (originally published in 1969 and in German translation in 1975), his review of learning Russian as a second language (1973), and a more recent work (Leontev 1981) are not touched upon and yet these works are surely major recent contributions to language learning and acquisition, measured by any criteria.

In addition to these omissions of broad areas of research, there are other puzzling omissions. The book contains a reference to Carroll's 1968 article where he, in discussing some aspects of cognitive code-learning method, suggests that "once the student has a proper degree of cognitive control over the structures of language, facility will develop automatically with the use of the language in meaningful situations." The authors dismiss the notion that explicit rule knowledge must precede fluent use of language, which is hardly what Carroll meant. This is evident from Carroll's discussion of "rules" and "habits" in a more comprehensive review article in 1971. The article is as relevant today as it was when it was first published. Anyone who wants to make an informed judgment of *Language Two* would do well to reread that article (cf. also Leontev 1981:41-47).

There is no space devoted to discussing the role of memory. Are we to assume from this that it is not an important consideration in language acquisition or that memory works in the same way in both L1 and L2? It seems strange that a modern book which frequently refers to cognitive processing does not deal with memory as an important part of the theory of verbal activity.

Similarly, there is virtually no space given to vocabulary learning. Yet, vocabulary knowledge is known to be the single best predictor of discourse comprehension (e.g., Anderson and Freebody 1979). Personal experience

alone in learning several foreign languages suggests that once the relatively limited task of learning the basic structures is over, the building up of an adequate vocabulary (e.g., formulas, idioms, collocations) is a never-ending task.

### **Problematic Methodological Procedures**

The greatest methodological problem with *Language Two* is the authors' frequent attempts to dismiss data that are not in line with their views. This method is well illustrated by the following quotation: "There are indications that interlingual errors are occasioned by at least two environmental factors: (1) conditions that result in premature use of L2, and (2) certain elicitation tasks" (p. 108). But surely this is circular. In effect, the authors maintain that (1) interlingual errors will not occur when students have had time enough to master L2 *well enough* (completely?) and (2) interlingual errors do not occur if you *exclude situations* where they might occur. Essentially these statements contain a tautology: Interlingual errors do not occur if you fix the situation so that they do not (cannot) occur!

Another questionable methodological procedure is illustrated by the following statements:

The new phonology is built up using L1 phonology as a base. *Because the L2 learner already has an L1 phonology, and uses it as a foundation for further learning, the learner's L2 speech will have a substratum of L1 sounds . . .* (p. 112). In neither child nor adult L2 performance do the majority of the grammatical errors reflect the learners' L1. (p. 97; emphasis added)

Still, the L2 learner has not only the L1 phonology but also L1 syntax, which he or she, by the same token, *could* use as a foundation for further learning of L2 syntax. Assuming that the observation by Dulay, Burt, and Krashen is correct, it is odd that no explanation is offered for this remarkable difference and that it does not bother the authors that in one case they cite the prior existence of L1 rules (knowledge, habits, or whatever term one wishes to use) as an *explanation* ("Because . . .") and in another case they explicitly deny that the phenomenon exists and thus reject the same explanation.

There are many indications that Dulay, Burt, and Krashen take pride in belonging to a group of researchers who are involved in "basic" research and clearly seem to advocate that the theory of L2 teaching should be

developed on the basis of scientifically sound basic research rather than “suspect” applied research. This scientific orientation is revealed by their discussion of L2 research methodology and their strictures against some researchers who, in their opinion, are not careful enough in their designs and methods. With such professed interest—and surely implied competence—in research methodology one would have expected that such conflicting generalizations are subjected to an attempt to explain them according to some consistent principle (theory). As Dewey, among other philosophers of science, has pointed out, facts are nothing as such. They ought to be *interpreted* and explained in order to be even accepted as facts.

Another peculiar methodological procedure is that although Dulay, Burt, and Krashen often find that they have to qualify their generalizations, this is typically done by way of footnotes. For instance, on page 40, after stating that learners will hear structures that they are ready to process, increasing the chances that they will be able to attend to processing them, they admit in a footnote that “It is *important* [emphasis added] to distinguish at least two different ways in which a language learner might use a structure in speech: 1) as a productive rule that has been integrated into the learner’s target language grammar; and 2) as an unanalyzed fragment.” Later on they are more willing to take into account type 2 but still label it a “*special* construction” (pp. 233-242).

It is a commonplace in the philosophy of science that a new theory, or at least a better theory, ought to be able to explain a greater number of phenomena than earlier theories. It should integrate all extant findings into a consistent system of constructs and concepts. Dulay, Burt, and Krashen do exactly the opposite: They label certain forms of language activity as “natural” (and the others, by implication, “unnatural”) and consider other than structured or unstructured conversations as elicitation forms to suffer from “serious methodological flaws” (p. 103, fn. 7), and thus dismiss their divergent findings as irrelevant for theory or at least for their theory. The authors’ theory is thus a limited theory and yet it reads as if it were meant to be taken as a comprehensive one (cf. the title of the book). It is not immediately obvious why a limited theory should be preferred to a broader one, which does not confer honorifics to some forms of language activity but which simply tries to describe and explain *all* forms of language activity.

To conclude this section, the methodological procedure adopted by Dulay, Burt, and Krashen reminds one of the behavior of some characters in Gilbert and Sullivan. Admissions of exceptions, often in footnotes, resemble the behavior of Captain Corcoran in *H.M.S. Pinafore*. He boasts

that he is *never* sick at sea and that he *never* uses bad language. When the crew twice asks him incredulously “What never?” the Captain admits that he “*hardly ever*” does such things. Dismissing divergent findings, again, reminds one of Ko-Ko, the Lord High Executioner (in *The Mikado*), who has “got a little list of social offenders who might well be underground and who never would be missed.” Like Ko-Ko and the Mikado himself, who is trying his best to achieve his high goal in life in “letting punishment fit the crime,” Dulay, Burt, and Krashen seem intent on making data fit the theory and dismissing to limbo some researchers and data, suggesting that they will not be missed. What works in comic opera does not work in science. Real advance in L2 research is possible only when all reliably observed data are accepted as data illustrating the complex nature of language activity. The proper task of L2 theory is to give an account of *all* forms of language performance as they appear in different circumstances in response to different task parameters.

### Some Alternative Lines of Research

It can be argued that one of the reasons why so much of recent L2 acquisition research is of limited interest and use to the L2 teaching profession (cf. the focus on first grammatical morphemes) is that it is so dominated by a basically linguistic foundation. This is not to say that researchers should not have a good grasp of the structural characteristics of language. At least as important as studying the forms of language, however, is studying what students can do with their language in social and academic situations. We are not usually interested only in what students can do *on* language but also *with* language.

This means that it is important to pay sufficient attention to language as a form of human *activity*. Teachers and researchers should be familiar with the social and psychological characteristics of human activity (its motives, aims, structure, etc.) and how these are manifested in linguistic activity. Finally, it is necessary to try to elucidate the unique features of educational activity. In sum, L2 research should be more psychological, sociological, and pedagogical in character (in terms of its research questions, levels and units of analysis, etc.) and be less occupied with linguistic elements and units. Leontev (1973, 1981) is probably right when he suggests that the idea of building models of speaker and hearer as linguistically oriented models is based on a misconception and that no linguistic model can adequately interpret real mental processes carried out by the speaker and the listener.

Several things, many of which diverge from the ethos and procedures

espoused by Dulay, Burt, and Krashen, need to be done in order to make L2 research more relevant to L2 teaching and learning.

The implicit idea that a general theory of L2 teaching and learning has to be developed mainly on the basis of research on L1 acquisition and L2 acquisition which observes and measures performance in a “natural” manner and after “natural” exposure to language, is questionable or at least limited. There is no need for researchers to limit themselves to this essentially Piagetian type of study. It is equally, if not more, important to do research in the Vygotskian manner. This means that one would not limit oneself to studying the established developmental level by having students acquire language essentially on their own (“naturally” through the subconscious functioning of the organizer) but would study what children can do with the problem-solving approach and development-fostering arrangements. Vygotsky advocated such an approach, because “what a child can do with assistance today she will be able to do by herself tomorrow” (Vygotsky 1978:85). More than fifty years ago Vygotsky formulated the notion of the “zone of proximal development”—which of course is what the celebrated  $i + 1$  recapitulates—according to which teaching has to set its sights on tomorrow and learning has to be in advance of development (acquisition?), while the latter reflects only the state of affairs as it was yesterday or is today.

Deriving from one of the basic premises of education, namely, belief in the possibility of fostering student development through teaching and learning (utilizing the Vygotskian notion of the zone of proximal development), we should seriously question absolute statements like “Correction of grammatical errors does *not* help students avoid mistakes” (p. 253), so typical of the authors but by no means limited to them alone. Educators should take such statements as challenges, as hypotheses, not as proven facts. Surely *some* students expect error correction and similarly surely *some* students benefit from them. Thus the interesting question is, What are they doing which makes them benefit from error correction and why do they welcome it? Could such exceptions be made into a distinct majority?

The problem with statements like the one quoted above is that they are too broad. If we take it literally, logically speaking finding one student who benefits from error correction would refute the statement. In science, most statements are more reasonably couched in terms of statistical probabilities. A more appropriate statement would, therefore, be “Error

correction methods in their present form do not typically help students avoid mistakes.”

The statement, whether in its original strong form or in its weaker form, should not be seen as an end to the chapter on error correction but as a beginning. Error correction should be problematized. What is its logic? What are the necessary and sufficient conditions for its effectiveness? Asking such questions is almost answering them. Obviously what matters, in the final instance, is not only that there is overt, external error correction available to students, but what—if anything—happens in the students’ minds. We know from psychology (cf. Carroll 1971) that a nominal stimulus is by no means always a functional stimulus. We also know that students have to reconstruct tasks to fit their mental representations. Pedagogical ingenuity ought to be used to come up with a variety of possible ways of fostering students’ active processing of corrections (in spite of Dulay, Burt, and Krashen’s strictures against conscious learning), and make this processing somehow visible to both students and teachers. Typically, this means that students have to *do* something showing that they can *apply* the principle (rule) in a new task. Another complementary way is to encourage students to diagnose in their own words what their “bug” in the rule application was and what needs to be done to produce a correct answer (i.e., fostering meta-knowledge).

An exciting research program awaits researchers wishing to study the role and forms of feedback as a form of fostering meta-knowledge. Researchers wishing to do research that is immediately relevant to L2 teaching and learning could, in fact, do worse than look at similar statements and recommendations in this book (especially those beginning with “don’t) and rather than accepting them as facts treat them as provisional facts, problematize them, and start serious conceptual work on the phenomenon. Why should it be so? What internal processes must be assumed to account for such a state of affairs? Are such processes inevitable or artifacts of a particular situation and task? If processes are at least to some extent malleable, what would be various ways of modifying them? What is the minimum reasonable time of “treatment” before a modified process can be assumed to have stabilized so that effect measurement is sensible? What can we learn from student performance during the process towards stabilized processing? How should treatment effects be measured so that measurement is sensitive to change and also valid and reliable? Thinking about such questions would discourage

hastily planned and sloppily executed studies. Research on L2 has had more than its fair share of such studies and they are of very questionable value.

Fortunately, there is no need to start from scratch. There are several excellent studies reported—mainly within L1 research—for instance, on how students learn from text and how text characteristics influence memory and comprehension. There are also a number of exemplary empirical studies which have successfully influenced students' cognitive strategies and have led to significant improvements in learning. L2 researchers would benefit greatly by being familiar with recent research on memory for verbal material (constructive and reconstructive processes in memory), story grammar, schema theory, methods of analyzing text characteristics, and experimental and observational studies of various classroom techniques. There is a wealth of interesting and useful articles published in recent years in journals such as *Reading Research Quarterly*, *Journal of Educational Psychology*, *Cognitive Psychology*, *Journal of Verbal Learning and Verbal Behavior*, and *Review of Educational Research*, to mention just a few.

A basic tenet of the new approach is that a relevant theory of L2 acquisition/learning can be developed by operating with meaningful elements of L2 curriculum used in normal classroom teaching. A theory of L2 teaching and learning that is immediately relevant to the L2 profession can—and probably should—be developed by operating *directly* with various aspects of the classroom teaching-learning setting (rather than extrapolating from so-called basic research, which often seems to shun the classroom): by studying changes in language performance brought about by different arrangements of *teaching activities*, *student activities*, the characteristics of the *linguistic material*, and their complex *interactions*. A theory of L2 teaching and learning is best developed on the basis of direct work that tries to understand the specific characteristics that distinguish the teaching and learning activity from other types of activity and the school community from other types of communities.

Thus, for instance, in developing a theory of how students process L2 text (heard, read, produced in dialogue or by monologue), it is crucial to understand how the great number of variables involved in such a situation can be manipulated on a principled basis. A thorough knowledge of text characteristics, of cognitive and metacognitive processes, and of ways of influencing them, of ways of measuring various levels of understanding,

etc., is needed. Such an approach is immediately relevant for L2 teaching, since “texts” are the most common units on which all teaching, including L2 teaching, and learning operates.

It should be obvious from the foregoing that experimental studies of the types suggested above need to be very carefully planned. There is no point in going to a class with a “treatment” that is not based on state-of-the-art knowledge and methodological tools. It should not be assumed that this knowledge and these methods are solely to be found in L2 literature. On the contrary, optimal advance in L2 research is possible only if it maintains close links with mother-tongue research, cognitive research, and educational research in general. L2 research cannot and need not do all the necessary theoretical work on its own. Although L2 teaching and learning differ on several points from teaching and learning in other subjects, there are still quite a few similarities which make careful extrapolation from related fields possible and useful.

In conclusion, it would be difficult to score *Language Two* using a holistic scoring method. On an analytic scheme, it undoubtedly gets high marks for the organization and presentation of content and for taking the audience into account. But when it comes to the quality and scope of ideas, it does not rate as highly. Thus, when we make an overall judgment, it depends on whether one values form or content. *Language Two* fulfills the Gricean maxim of clarity very well and it is also fairly informative, but as I have tried to show, one can wonder on several points about its truthfulness (accuracy) and about its relevance, not only for L2 teachers but also for the theory of L2 teaching and learning/acquisition.

Borrowing a term from the book, it is a “flawed” book. Contrary to the claim that most of our knowledge of how people learn languages stems from work done during the past twenty years, it is embarrassing to note that *Language Two* contains few insights that were not mentioned by people like Erasmus, Milton, Pestalozzi, and others, and more recently by Carroll (1963) in his theory of school learning. It can be conjectured that the authors have two options in their further work: either they make new advances in the art of footnoting to cope with the objections and counter-evidence bound to accumulate due to the limited scope of the theory or they go back to the drawing board and try to account for all manifestations of language activity, “natural” and otherwise. It can also be conjectured that a more promising line of research is one that takes a more psychological, sociological, and pedagogical view of L2 learning and

teaching, one that studies teaching and learning activities directly as they manifest themselves in the classroom, and one that addresses actual units of the foreign/second language curriculum.

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