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Introduction: One Approach to the Interaction of Linguistics, Second-language Acquisition and Speech-language Pathology

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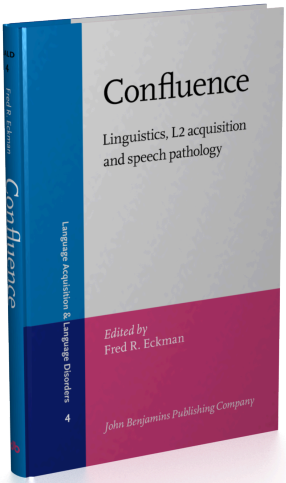

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Introduction:

One Approach to the Interaction of Linguistics, Second-language Acquisition, and Speech-language Pathology

Fred R. Eckman

In April of 1989, a symposium on the interaction of linguistics, second language acquisition and speech-language pathology was held on the campus of the University of Wisconsin — Milwaukee. The primary goal of this conference was to provide a forum in which linguists, second-language acquisition specialists and speech-language pathologists could address issues and topics of mutual interest. This volume represents a subset of the papers presented at that symposium.

That these three disciplines impinge on each other in areas of vital importance to each seems to be undeniable. All three fields are concerned with the characterization of language in one form or another; and all deal with the acquisition of language by one segment of the population or another.

Given this context, the primary goal of this collection of papers is to outline some of the areas in which these three disciplines interact. Specifically, it is proposed that an important question, if not the most important question, in the relationship among these three fields is the following:

> What weight or implications do findings in one of the three fields in question have for one or both of the others?

The purpose of raising this question is simply to provide food for thought, since an answer will have to emerge as the relationships among the three disciplines evolve. In view of this, let us, therefore, outline one possible relationship.

Linguistics, as construed by one of the most influential schools of thought in this country, namely, generative grammar, is concerned with the characterization of what a language is, and how it is acquired. Much of the work in this framework centers around the description of the human language faculty, which is assumed to govern language acquisition by children in normal circumstances. Second-language acquisition, on the other hand, deals with the characterization and learning of a language, usually by an adult, when one language is already resident. Speech-language pathology is concerned with the description and treatment of various language disorders in both children and adults, and with the relationship of these so-called disordered languages to normal linguistic systems.

Thus, all of the disciplines deal to some extent with the acquisition of language, and all of the fields overlap with one of the others in the population with which it is concerned. But although these fields of inquiry share a general domain, the specific goals of the individual disciplines are distinct in that each approaches the problem of language description and acquisition from a different perspective. Linguistics and speech-language pathology both concern themselves with primary-language acquisition, but speech-language pathology is concerned with instances in which the acquisition has somehow gone awry or been delayed. Linguistics and second-language acquisition both deal with the description of languages; however, second-language acquisition theory is concerned with learner-languages, or inter-languages. Both speech-language pathology and second-language acquisition deal with language intervention; however, in the case of second-language acquisition, the intervention may be complicated by the fact that there is a language already resident. With each field having developed expertise in its respective area of the problem of language description and acquisition, it seems reasonable that each field has, in principle, something to contribute to, and something to gain from, the others.

The relationship among the three disciplines, in fact, seems to be that of theory to practicum, played out in several directions at once. In general terms, let us define *theory* as being concerned with problems of explanation internal to a given theoretical framework itself, and *practicum* as being involved with solving problems that have more common, every-day implications. The fields of second-language acquisition and speech-language pathology are both comprised of two interrelated branches, one more theoretical, and the other more practical. Second language acquisition encompasses the study of how secondary languages are learned, the

theoretical component, and also includes the development of methodologies for teaching these languages, the practicum. Similarly, the field of speech-language pathology, as theory, involves the analysis and explanation of speech and language disorders, and as practicum, the remediation of these disorders through the design and implementation of various intervention techniques and programs. Both of these fields, in the theoretical as well as the pedagogical or clinical areas, make crucial use of principles and constructs from linguistic theories. And under the above definition, it is also fair to say that, relative to linguistics, second-language acquisition and speech-language pathology bear the label of practicum rather than theory.

Ideally, the flow of information among the three disciplines in question would be such that each is informed by work and progress in the others. That such a relationship between theory and practice does not yet exist among the fields being discussed in this volume seems clear. The connection that exists is one in which the theoretical fields inform the practical domains, but the theoretical fields are not informed by the practicums.

Thus, the literature abounds with examples in which both second-language acquisition and speech-language pathology make use of findings and constructs from linguistics. To cite just a few examples, Hyltenstam (1984), Pavesi (1986), and Hawkins (1987) all invoke certain linguistic universals to explain facts about second-language acquisition. Working within a different framework, White (1985) and Flynn (1987) argue for invoking principles of Universal Grammar to account for second-language data. For examples in speech-language pathology, suffice it to note the classic work of McReynolds and Huston (1971), using distinctive features, the recent studies relating phonological knowledge to the rate of learning (Dinnsen 1984), and considerations of some of the potential implications of Government and Binding for speech-language pathology (Leonard and Loeb 1988).

On the other hand, however, there are relatively few and only isolated instances in which it has been proposed that facts from second-language acquisition or speech-language pathology could have a bearing on linguistics. The most explicit case in second-language acquisition is Gass and Ard (1980), in which it is argued that not only do second-language data constitute a viable testing ground for language universals, but in fact these data are a better test than are data from child-language acquisition. As a rule, however, the results of applying linguistic facts and principles to second-

language or disordered data do not constitute evidence either for or against those linguistic principles. In short, it is difficult to imagine a linguist, who happens to be a proponent of a certain theory or construct, altering or abandoning that construct on the basis of evidence obtained in the clinic or the classroom. In fact, in view of apparent counterevidence to linguistic generalizations from, say, second-language data, it is not suggested that the generalizations should be revised or abandoned even by those who did not propose the generalizations.

As an illustration of this point, let us consider an example from the second-language acquisition literature. The principle involved is the Accessible Hierarchy (Keenan and Comrie 1977), which attempts to characterize the types of relative clause constructions found in the world's languages. This hierarchy, shown below, predicts that if a language can form a relative clause by relativizing an NP from a given position, x, on the hierarchy, that language can necessarily form relative clauses by relativizing NP's in all positions higher than x, but that such a language cannot necessarily relativize NP from positions lower than x. Thus, for example, a language which can form relative clauses by relativizing the indirect object NP, can necessarily relativize the direct object and subject NP's, but such a language may not be able to relativize an NP which is the object of a preposition, genitive or object of a comparative.

(1) Accessibility Hierarchy
Subj
Dir obj
Ind Obj
Obj of Prep
Gen
Obj of a Comparative

This hierarchy, or parts of it, have been invoked to explain data from second-language acquisition in a number of different studies (Gass 1979; Hyltenstam 1984; Pavesi 1986). What is of interest is that the second-language data do not conform completely to the hierarchy, or stated differently, the hierarchy is not completely supported by the data. For Gass' findings, the Genitive position was ranked higher than the Direct object position; for Hyltenstam the Object of the preposition ranked higher than the Indirect object; and for both Hyltenstam and Pavesi, the Genitive position ranked last, lower than the object of a comparative particle. Despite these

findings, no one questioned the Accessibility Hierarchy, or suggested that the ranking of the positions should be changed.

This relationship between theory and practice does not hold in all disciplines. A situation in which findings in two separate fields impinge on the other, where one can be said to be theoretical and the other can be said to be practical, is outlined in a paper by Ritchie (1978). He considers the relationship between biological science and clinical medicine, and argues that theories of pathology developed by biological science have a direct bearing on how diseases are treated clinically. Likewise, the results obtained by such clinical treatment serve as a test for the theory of the disease. Ritchie goes on to argue that this relationship between the theory and the practicum is at least in part responsible for the great advancement that has been made by medical science in the treatment of infectious diseases.

Given that the situation among the three disciplines under discussion in this volume is one in which theory unidirectionally informs practicum, the question arises as to whether this relationship is a necessary one. Referring back to Ritchie's example, it is not in the nature of things that all relationships between theory and practicum must be this way. Therefore, the issue becomes, is it in the nature of the theories and practicums in question that the information flow must be unidirectional?

It does not appear that one could make the case that data from secondary languages and speech-language pathology could not inform linguistics, because such data would constitute special cases as a result of the controlled or experimental situations in which the data were obtained. When one considers the situation in established sciences, such as chemistry or physics, one sees that chemists and physicists are generally less concerned with phenomena that occur naturally, and much more concerned with facts observed under the special or controlled conditions of the laboratory.

While it is admittedly premature to expect some fundamental insight or answer to this question, the goal of this volume is to open discussion on the issue. The papers are grouped into three general areas, namely, those dealing with: (1) linguistics and second language acquisition, (2) linguistics and speech-language pathology, and (3) second-language acquisition and speech-language pathology.

Turning first to linguistics and second-language acquisition, the issue of the implications of evidence in one field for arguments and claims in the other is addressed in the papers by Flynn and Rutherford. Both of these authors argue for a "two-way street" of communication between linguistics

and second-language acquisition theory; one in which second-language specialists inform as well as are informed by linguistics. Rutherford makes the point that the goals of both disciplines are woven together in the issue of learnability. Flynn carries the matter a little farther: she argues that facts about second language acquisition fall into the proper domain of linguistic theory. According to Flynn, grammars learned by second-language learners are governed by the principles of Universal Grammar (UG).

This notion that UG governs the grammars of secondary languages is echoed by other contributions in this first section. Klein considers what she terms the null preposition phenomenon, and proposes that this is a stage in the acquisition of preposition stranding. Platt addresses the question of the Null Subject Parameter of UG in a study of Vietnamese and Spanish learners of English. Her results present some problems for previous analyses. And Martohardjono and Gair take up the issue of the availability of UG in second language acquisition. They argue that showing the absence of some principle of UG in second language acquisition does not mean that UG is unavailable to the learner. Rather, they argue that the conditions necessary for the application of certain UG principles may not be met.

The other two papers in the first section deal with the notion of markedness in second-language acquisition. Balhorn looks at various notions of markedness to determine whether non-native speakers of English produce marked structures with the same frequency as native speakers. And Archibald considers the notion of markedness in the acquisition of stress placement from the point view of learnability. More specifically he raises several questions, including (1) whether the native language parameter is transferred, (2) how much data are required to trigger resetting the parameter in question, and (3) whether such triggering is the result of a mismatch between a learner's perception and production. In the second group of papers, which deals with the relationship between linguistics and speech-language pathology, the contributions by Dinnsen and Connell address disordered speech in children, and the one by Chen treats language disorders in adults.

Dinnsen proposes that the domain of misarticulated speech constitutes part of the domain of linguistics, because, he argues, the data from misarticulating children can be accounted for by existing linguistic principles. This suggests, in turn, that misarticulated data can be explained through the extension of linguistic theory to misarticulated speech, where extending the theory in this way results in no loss of generality. He goes on to claim that,

although misarticulated speech may be "deviant" when considered in relation to the ambient language, it is not deviant when looked at with respect to the range of possible variation among languages. The paper by Connell echoes the same theme. He argues that only language intervention which is grounded in a theory of language acquisition stands to yield fruitful results. Thus, for him, linguistic theory has definite implications for language remediation. He builds his case using data from specific language impaired (SLI) children, citing differences in how these children seem to acquire language relative to normal children.

The paper in this section that deals with adult speakers is by Chen. In a very interesting contribution, she considers the problem of morphology in aphasics from the viewpoint of two different models: the syndrome-dominant model and the languge-dominant model. She tests the predictions of these models, comparing facts from Chinese aphasics to those from English-speaking aphasics, and she concludes that morphological differences between languages affect aphasic symptoms.

In the final section, which deals with the relationship between speech-language pathology and second language acquisition, Damico discusses the similar histories of the two disciplines, tracing them through their early concern with "successful" language performance, to their structuralist orientation in the middle part of this century, on to the integrative, socio-linguistic approach of the last two decades. Damico points out that there have also been significant differences in the development the two fields, and that each discipline is in a position to benefit from the other.

Gierut, in her contribution, makes the same point quite convincingly, citing evidence from experimental studies. After discussing some of the ways in which speech-language pathology has benefitted from developments in second-language acquisition, Gierut addresses the ways in which second language acquisition could benefit from the methodology used in some studies in speech-language pathology. Specifically, she proposes the use of single-subject designs, a research design which has been used extensively by speech-language pathologists. In a single-subject design, treatment is performed on individuals rather than on groups in such a way that the individuals serve as their own controls. Gierut goes on to discuss some of the advantages of this methodology.

The paper by Hardy is a study employing these single-subject methods on an adult, second-language learner. She attempted to answer a number of questions about the subject's interlanguage phonological system, such as

which phonemes are learned first, what generalization takes place, and whether the subject retains what is learned from the training. One interesting aspect of this paper is that Hardy found several differences between her L2 subject and the findings of similar studies performed on misarticulating children.

The final paper in this section, the contribution by Kempler and van Lancker, deals with the performance of stroke patients and ESL learners on both idioms (what is termed "familiar language") and novel phrases. The authors found a number of differences between the stroke patients and the L2 learners, suggesting familiar and non-familiar language are both different and learned independently of each other.

In sum, the point has been argued that all of the disciplines in question impinge on each other in important ways. It would be difficult to imagine how someone could seriously defend the position that the three disciplines are not interrelated. Despite this, there has been relatively little, formal interaction. It is hoped that this volume will open a discussion that will be both fruitful and on-going.

References

Connell, P. 1986. "Acquisition of Semantic Relations by Language-disordered Children: Comprehension or Production". *Journal of Speech and Hearing Research* 29.384-397.

Dinnsen, D. 1984. "Methods and Empirical Issues in Analyzing Functional Misarticulations. Elbert, Dinnsen and Weismer 1984.

Elbert, M., D. Dinnsen and G. Weismer, eds. 1984. *Phonological Theory and the Misarticulating Child*. Rockville, MD: American Speech-Language-Hearing Association.

Flynn, S. 1987. *A Parametric Approach to L2 Acquisition*. Dordrecht: D. Reidel Publishing Co.

Gass, S. 1979. "Language Transfer and Universal Grammatical Relations". *Language Learning* 29.327-344.

Gass, S and J. Ard. 1980. "L2 Data: Their Relevance for Language Universals". *TESOL Quarterly* 14.443-452.

Gierut, J. 1986. "Sound change: A Phonemic Split in a Misarticulating Child". *Applied Psycholoinguistics* 7.57-68.

Hawkins, J. 1987. "Implicational Universals as Predictors of Language Acquisition". *Linguistics* 25.453-473.

Hyltenstam, K. 1984. "The Use of Typological Markedness Conditions as Predictors in Second Language Acquisition: The Case of Pronominal Copies in Relative Clauses". *Second Languages* ed. by R. Andersen, 39-58. Rowley, MA: Newbury House Publishers.

Keenan, E. and B. Comrie. 1977. "Noun Phrase Accessibility and Universal Grammar". *Linguistic Inquiry* 8.63-99.

Leonard, L. and D.F. Loeb. 1988. "Government-Binding Theory and Some of its Applications: A Tutorial." *Journal of Speech and Hearing Research* 31.515-524.

McReynolds, L. and K. Huston. 1971. "A Distinctive Feature Analysis of Children's Misarticulations". *Journal of Speech and Hearing Disorders* 36.155-166.

Pavesi, M. 1986. "Markedness, Discoursal Modes and Relative Clause Formation in a Formal and an Informal Context". *Studies in Second Language Acquisition* 8.38-55.

Ritchie, W. 1978. "Introduction: Theory and Practice in Second Language Research and Teaching". *Second Language Acquisition Research: Issues and Implications* ed. by W. Ritchie, 1-9. New York: Academic Press.

White, L. 1985. "The 'Pro-drop' Parameter in Adult Second Language Acquisition". *Language Learning* 35.47-62.