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Content and Questions: Volume 4

In this volume of *Issues in Applied Linguistics*, we bring you a range of studies from widely varying modes of investigation. Included in this issue are articles on language assessment, applied sociolinguistics, code-switching, and an application of principles from Universal Grammar to second language acquisition. Also included is a piece defending the applicability of connectionism as a productive paradigm for second language investigation. Additionally, three reviewers have provided their thoughts on recent publications in the areas of language typology, classroom oriented research, and writing English for science or academia.

Our first article is written by Charles W. Stansfield and Dorry Mann Kenyon of the Center for Applied Linguistics. The authors report on the development of an oral assessment tool for learners of Hausa. The piece not only reports on the development of a specific oral proficiency interview, it uses the results of the test's validation process to comment upon the ACTFL Proficiency Guidelines themselves.

Elaine C. Klein presents a compelling question in our second offering. Based upon her investigations into the phenomena of pied-piping and preposition stranding in L2 English, Klein asks questions about the relationship between Universal Grammar and second language acquisition. The answers she proposes have interesting implications for a theory of L2 acquisition modeled upon UG principles.

Learning to Understand in Interethnic Communication is our third paper. In it, Peter Broeder presents multi-language, longitudinal studies of second language acquisition by adult migrant workers who are without access to formal instruction. Broeder's interesting observation is that, before these people can learn a language, they must learn how to learn it. On the basis of this observation, the author presents several case studies which use

indices of non-understanding to show how problems in understanding are ameliorated and repaired, and how the second language is itself involved in this process. Broeder goes on to suggest ways in which the findings can be applied in language classroom situations and in the training of workers who interact with such populations.

Code-switching is an interesting phenomenon in bilinguals and is the topic of our fourth full-length feature. For this piece, Helena Halmari investigated the role of code-switching as a device for topic evaluation in naturally occurring discourse. Code-switching is an in-group behavior and, as such, Halmari has studied code-switches in the conversation of two Finnish-English bilingual children. Her results show that a remarkably high number of evaluative comments involved code-switching. Halmari uses these results to discuss the possible metaphorical significance of the direction of code-switching.

In our exchange section, Foong-Ha Yap joins a previously published IAL author, Yasuhiro Shirai, in defending the use of a connectionist framework in the study of second language transfer. Shirai and Yap are replying to an exchange published in the last issue of IAL, written by Cheryl Fantuzzi, that questioned the significance of such a framework. This ongoing exchange is an important one and should not be overlooked. Indeed, in this latest piece the authors discuss the potential of connectionism for constructing a general theory of second language acquisition. Issues of philosophy of science come to play in the exchange, in addition to the authors' advocacy of connectionist applications. We agree with the authors when they state that the field of second language acquisition profits from discussion of the merits and limitations of the connectionist paradigm and welcome continued discussion of this important topic.

In the review section, three authors submit their views on a number of recent books. Robert A. Agajeenian reviews Extra & Verhoeven's *Immigrant Languages of Europe*. Betsy Kreuter reports on Allwright & Bailey's *Focus on the Language Classroom: An Introduction to Classroom Research for Language Teachers*. Lawrence Lem compares two EST textbooks, Peter Master's *Science, Medicine, and Technology* and Weissberg & Buker's *Writing Up Research: Experimental Research Report Writing for Students of English*.

   With the beginning of our fourth year, *IAL* continues its effort to bring the reader interesting research from widely divergent and underrepresented areas of the applied linguistics community. We are dedicated to this mission, to bring as many voices to an issue as possible, in as fair a manner as possible. We are trying, as we grow and develop, to do something new, something different. And because the journal is young and has idealistic goals, we will inevitably make lots of mistakes. Bear with us as we collectively explore why applied linguists do what they do.

June 1993   Joseph R. Plummer

Development and Validation
of the Hausa Speaking Test
with the *ACTFL Proficiency Guidelines*

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This article reports on the Hausa Speaking Test (HaST), a simulated oral proficiency interview (SOPI). Following careful development, trials and multiple revision of test items, a validation study was conducted. The study addressed the validity of the HaST through an examination of the ratability on the ACTFL scale of the elicited speech sample and an investigation of the nature of probes on the HaST through the speaking tasks referred to on the ACTFL Proficiency Guidelines. The results have implications for both the validity of the HaST and that of the ACTFL Proficiency Guidelines.

INTRODUCTION

The introduction to the 1986 *ACTFL Proficiency Guidelines* states that the *Guidelines* "represent a hierarchy of global characterizations of integrated performance in speaking, listening, reading and writing" (American Council on the Teaching of Foreign Languages, 1986). This article demonstrates the use of the *Guidelines'* hierarchy for speaking in developing the Hausa Speaking Test (HaST), a tape-mediated oral proficiency test developed by the Center for Applied Linguistics (CAL) in 1989. The article also reports on some preliminary research conducted to validate both the HaST as a surrogate for the Oral Proficiency Interview (commonly known as the OPI, a face-to-face assessment procedure of speaking ability in a foreign language) and to validate the *ACTFL Guidelines* as representing a consistent hierarchy of speaking proficiency.

The Hausa Speaking Test (HaST) was developed by CAL as one of a series of tape-mediated speaking tests to meet the need for oral proficiency testing in the less commonly taught languages. Although Hausa is not the national language of any single country, it is an important West-African language, spoken as the mother-tongue of some 25 million speakers in northern Nigeria and southern Niger, and as a second or third language for half again that number (Newman, 1987). In 1986, after Swahili and Yoruba, it was the most widely studied African language in the United States (Brod, 1988).

Although there is much discussion in the literature about the validity of the *ACTFL Guidelines* and the OPI (Bachman & Savignon, 1986; Barnwell, 1989; Hagen, 1990; Kramsch, 1986; Lantolf & Frawley, 1985, 1988, 1992; Shohamy, 1990), the OPI and the *Guidelines* have exerted tremendous influence on the field of foreign language teaching in the United States. A bibliography published in 1989 included over 400 articles in the literature focusing on the *Guidelines* and their application to language assessment and teaching (Stansfield & Thompson, 1989). It is safe to say that the OPI has become the most influential model for assessing oral proficiency.

In less commonly taught languages such as Hausa, however, trained OPI testers are rare or nonexistent. Because a tape-mediated approach to testing oral proficiency eliminates the need for an on-site interviewer, it seemed to language testers at CAL to offer an efficient and feasible approach to oral proficiency testing in low-volume languages, providing the positive washback to be derived from oral proficiency testing and serving as an impetus for competency-based learning on the part of students of less commonly taught languages. Experience in training raters in the scoring of CAL's tape-mediated testing format has also shown that it is easier to train individuals to score such a test then to train individuals to both administer and rate an OPI.

With support provided by the U.S. Department of Education, CAL has developed tape-mediated tests in Chinese (Clark & Li, 1986), Portuguese (Stansfield & Kenyon, 1988; Stansfield, Kenyon, Paiva, Doyle, Ulsh & Cowles, 1990) , Hebrew (Shohamy, Gordon, Kenyon & Stansfield, 1989), Indonesian and Hausa (Stansfield & Kenyon, 1989). All of these tests follow a similar format, which Stansfield (1989) has called the simulated oral proficiency interview (SOPI). Through careful construction

following the hierarchy outlined in the *Guidelines*, the SOPI seeks to elicit from the examinee a speech sample ratable on the ACTFL scale. Instead of eliciting speech via a face-to-face interaction (as in the OPI), the SOPI uses recorded and printed stimuli. Yet the goal of the SOPI is the same as that of the OPI: to assess an individual's proficiency in a foreign language on the *ACTFL Guidelines* (often referred to as the ACTFL scale).[1]

The ACTFL scale is an adaptation of a scale that has been used in government agencies since 1956. The scale is commonly known as the Federal Interagency Language Roundtable (FILR) scale (Liskin-Gasparro, 1987). The FILR scale denotes eleven levels as follows: 0, 0+, 1, 1+, 2, 2+, 3, 3+, 4, 4+, and 5. The ACTFL adaptation encompasses only the FILR levels from 0 to 3. It has four main levels: Novice, Intermediate, Advanced and Superior, and several sublevels, as presented in Table 1 with the FILR scale equivalences. For the HaST, CAL has added one level above Superior (High-Superior), which is used to identify examinees approaching the level of educated native speaker (3+ to 5 on the FILR scale). Appendix A contains a copy of the scale used to score the HaST.

Table 1.   The ACTFL and FILR Scales

ACTFL	FILR
Novice-Low	0
Novice-Mid	0
Novice-High	0+
Intermediate-Low	1
Intermediate-Mid	1
Intermediate-High	1+
Advanced	2
Advanced-High	2+
Superior	3
High - Superior*	3+ - 5

* Used by CAL to denote performance above Superior

Format of the HaST

The OPI follows a format tailored to the level of each examinee. Following a warm-up, the interviewer seeks to check his or her assumption about the proficiency level of the examinee by asking the examinee a series of questions at the examinee's apparent level of proficiency. To further confirm this assumption, the interviewer also presents probes, which are questions at a level slightly above the examinee's apparent level.

As a SOPI, the HaST also uses a well-defined though fixed format intended to check and probe the examinee's proficiency. The structure of the SOPI also presents the examinee with speaking tasks at different levels of speaking proficiency, as they are represented by the *ACTFL Guidelines*. Since all of the tasks on the SOPI are ones that can be effectively handled only by responding with more than isolated words and learned phrases, the SOPI is not designed for Novice-level learners. The format of the HaST can be divided into six parts:

1. Warm-up
2. Giving Directions
3. Picture Narration
4. Topical Discourse
5. Situational Discourse
6. Wind-down

Each of these parts presents examinees with speaking tasks at specific levels of the ACTFL hierarchy. The intended level of each speaking task in each part of the HaST is presented in Appendix B, which outlines the structure of the test. These parts are described in detail in the following sections.

1. *Warm-up*. After the general directions are read to the examinee from the master tape, the test begins with simple personal background questions posed on the tape in a simulated initial encounter between a native speaker of Hausa and the examinee. During a brief pause, the examinee records a short answer to each question posed on the tape. Items in this part of the test require examinees to respond to tasks ranging from formulaic speech (Novice-level responses) to giving personal information (Intermediate-level responses). This section is analogous to the warm-up section of the OPI. Its purpose is to ease the examinee

into the testing situation and allow him or her to become accustomed to the testing format.

Following the warm-up are the four core parts of the HaST. These are designed to elicit language similar to that elicited during the *level check* and *probe* phases of the OPI. Items are designed to test the examinee's ability to handle speaking tasks at the Intermediate, Advanced and Superior levels as defined by the *ACTFL Guidelines*. The directions to all the items in these four parts are read on the master tape and printed in the examinee's test booklet. All directions are given in English to ensure that the tasks required of the examinee are clear and to ensure that the examinee is given the opportunity to give his or her best performance regardless of listening proficiency (which would ideally be tested in a different format). Parts two and three also use pictures which are printed in the test booklet. Following the reading of the directions, the examinee is given between 15 and 30 seconds (depending on the difficulty of the task) to silently prepare a response. After a tone signal, the examinee has between 45 seconds and two minutes to record his or her response.

2. *Giving Directions*: The examinee is asked to give directions on the basis of a simple map. This Intermediate-level task is contextualized in that the interlocutor to whom the examinee will speak is identified and the reason for the request for directions is explicitly delineated in the prompt.

3. *Picture Narration*: The HaST contains three such items. Successful completion of the task presented in these items requires the examinee to narrate in present and past time, and to give a series of commands to help a Hausa speaker through an unfamiliar procedure. All of these are tasks at the ACTFL Advanced level.

Parts four and five of the HaST require the examinee to tailor his or her discourse strategies to selected topics and real-life situations. These last two parts assess the examinee's ability to handle the speaking tasks and content that characterize the Advanced and Superior levels of the *ACTFL Guidelines*.

4. *Topical Discourse:* The examinee is instructed to talk about selected topics involving different discourse strategies. The selection of topics is intended to probe the examinee's ability to provide information on a variety of subjects involving different vocabulary domains. Speaking tasks include explaining a process (Advanced), supporting an opinion (Superior) and talking about a

hypothetical situation (Advanced/Superior). There are five such topics, each printed in the test booklet.

"Talk about the advantages and disadvantages of using public transportation" is an example, taken from the *Hausa Speaking Test Examinee Handbook*, of a typical topical discourse item. The item's speaking task is to state advantages and disadvantages, which is intended to elicited Advanced-level performance.

5. *Situational Discourse*: The examinee reads a printed description of a real-life situation in which the background circumstances, the interlocutor or audience, and the communicative task are identified. The examinee is then instructed to carry out the specified task. The tasks range from making simple requests (Intermediate level) to giving a brief informal talk to a gathered group (Superior level). Situations differ from topics in that the situations emphasize the ability to tailor one's speech to the audience and the circumstances.

The following is an example of a situational discourse item for the Intermediate-level speaking task of making a simple request, taken from the *Hausa Speaking Test Examinee Handbook.* "You are with a Hausa friend at a market in rural Hausaland. Ask your friend to recommend a special gift for you to take home for your family in America." An example to illustrate a Superior-level speaking task (giving a brief speech) is, "At the end of a year-long stay with a family in Hausaland, you present them with a small gift and express your gratitude for all they have done for you during the past year."

The final part of the test is analogous to the wind-down of the OPI. The questions are given in Hausa, and the examinee responds directly after hearing the question, as in part one of the test.

6. *Wind-down*: This part contains three simple questions in Hausa spoken by the same individual as in the first part of the test. It is designed to put the examinee at ease and to facilitate the ending of the examination in as natural a manner as possible and is not used in the rating of the test. The wind-down permits the examinee to comment on the test and the testing experience.

Distinctive Aspects of the HaST

Through experience in developing SOPIs in the less commonly taught languages, test developers at CAL have learned

that each language presents its specific challenges. Although based on the prototypical Chinese Speaking Test (Clark & Li, 1986) and the Portuguese Speaking Test (Stansfield et al., 1990), the HaST was modified to accommodate concerns of both the local test development committee and the external review committee[2], and on the basis of data collected through extensive pilot testing. Although every attempt is made to avoid culturally loaded situations on a SOPI, as an outcome of the iterative process of review and pilot testing the test developers found that the HaST items needed to be fairly highly contextualized to Hausaland culture in order to elicit ratable speech samples. In particular, the setting for prompts needed to be "de-urbanized" as much as possible. It was found that Hausa was a language particularly tied to its cultural setting, and examinees had problems relating Hausa language use to non-Hausaland settings. This was particularly true of examinees who had learned Hausa in Africa.

In addition, the difficulty level of the test was also lowered by including more Intermediate level questions and fewer Advanced and Superior level questions than on earlier SOPIs. This was in response to the practical realization that few, if any, of the North American students of Hausa who had not spent extensive time in Hausaland would ever reach the Advanced, much less the Superior, level in Hausa. By lowering the difficulty level of the test, more examinees would feel comfortable taking the test.

Finally, in order to accommodate morphological inflections by gender required in Hausa, two versions of the master tape were made. In one version, male examinees are addressed, while the other addresses female examinees. Standard Hausa, as spoken in Kano, Nigeria, was used.

Two parallel forms of the HaST were developed (Form A and Form B). The forms are parallel in respect to the speaking tasks each item addresses (e.g., give directions or support an opinion), though the specific content of each task is different. In every case, the content of each item was designed to be accessible to adult English-speaking learners of Hausa at all proficiency levels above ACTFL Novice, so that an examinee would be able to at least say something, even if completion of the specific speaking task required proficiency in Hausa above what the examinee currently possessed.
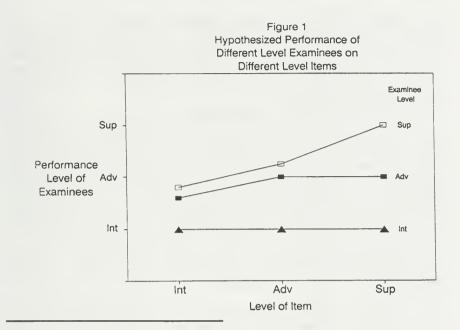
Research on the HaST and the *ACTFL Guidelines*

The goal of initial test development research is to validate a new test; i.e., to determine its appropriateness for the testing purposes for which it is intended. In the case of a SOPI, it is necessary to determine if the test is an appropriate surrogate for the OPI in the less commonly taught languages. To establish the comparability of the SOPIs developed by CAL in Chinese, Hebrew, Indonesian, and Portuguese, both the SOPI and an OPI were administered to a sample of language learners and scores obtained on each were compared; these were concurrent validity studies. The average correlation across languages, tests, forms, and raters between the SOPI and the OPI was .92 (Stansfield, 1989). Because there were no ACTFL-trained oral proficiency interviewers in Hausa, similar research could not be conducted for the HaST.

In lieu of a direct comparison with an OPI, the validation study of the HaST sought to answer the question of whether the test was doing what it was designed to do; i.e., to probe the various levels of proficiency as defined by the *ACTFL Guidelines* through the use of tasks specifically developed to elicit speech at the various levels of the ACTFL scale. Unlike previous studies, which only examined the final rating awarded to an examinee, this study explores the functioning of the individual items on the test.

It was hypothesized that if the HaST were functioning like an OPI in its ability to probe speaking proficiency, then examinees at the Intermediate Level would be rated as Intermediates not only on Intermediate level items, but on all items; that examinees at the Advanced Level would generally score above Intermediates at all levels, but particularly show their higher proficiency on Advanced level items; and that examinees at the Superior level would consistently show themselves to be better than both Intermediate and Advanced Level students on all items, but particularly demonstrate their Superior level ability on those items that required them to handle Superior level speaking tasks.

These hypotheses are expressed in diagram form in Figure 1. This figure shows the hypothesized mean ratings for each group of examinees (Intermediate, Advanced and Superior) on each group of items (by intended level). Three relevant specific hypotheses were delineated as follows:

Figure 1
Hypothesized Performance of
Different Level Examinees on
Different Level Items

1.   Intermediate level examinees would never score above the Intermediate level on any item.
2.   Advanced level examinees would perform better than Intermediate level examinees on Intermediate items, at the Advanced level on Advanced items, but not above the Advanced level on any item.
3.   Superior level examinees would perform better than Intermediate and Advanced level examinees on Intermediate and Advanced level tasks, but not be able to fully demonstrate their Superior level except on Superior level items.

PROCEDURES

Thirteen subjects were administered both Form A and Form B of the HaST. Each subject was administered the appropriate version (male or female). The design controlled for order of administration, with half of the subjects receiving Form A first and Form B second, and the other half in reverse order.

Most of the subjects were administered the HaST at the Center for Applied Linguistics using two tape recorders. Some of the subjects were administered the test at the language lab at their respective universities or by their Hausa instructors. Two of the subjects administered the taped tests to themselves at home using two cassette tape recorders.

All of the subjects were adults; six were male and seven were female. Due to the scarcity of suitable subjects (i.e., Hausa students at the ACTFL Intermediate level or above[3]), the subjects could not be randomly selected. The sample included several university level students of Hausa, several subjects who had learned Hausa through experience in the Peace Corps and did not have formal academic training in the language, and several individuals who had learned Hausa in other situations and who have occasion to use Hausa in their work. Because the number of Hausa-as-a-second-language speakers is so small nationwide, it was unavoidable that a few of the subjects tested were personally known to the raters.

Due to the small number of Hausa linguists familiar with the ACTFL scale, it was necessary that the two raters used in the study be selected from the members of the local and external test development committees. Both had received some ACTFL training and one was working on ACTFL certification as an ESL oral proficiency tester at the time. However, neither was ACTFL-certified and neither had formerly rated Hausa speech samples on the ACTFL scale.

The raters scored each examinee's performance on the HaST using a form that asked them to do the following:

1. to rate each examinee's performance on each individual item, basing the judgement solely on the performance on that item;
2. to award a score for the usefulness of the speech sample elicited by each item in rating that examinee's proficiency;
3. to award a holistic proficiency rating to the examinee's entire test performance.

The 26 examinee tapes (13 examinees, 2 forms) were scored by the two raters independently in sets of five or six. Each examinee received a single holistic rating on the basis of his or her performance across the various types of items on the test. After each set of tapes was scored, however, the two raters, without

changing their original rating, compared their holistic ratings and discussed disagreements. This self-training was built into the design because the raters had not previously applied the ACTFL scale to the rating of speech samples in Hausa.

RESULTS

In the empirical analysis of the ratings, scores on these two SOPI test forms were converted to a numerical scale combining both the ACTFL and FILR scales, with weights assigned to reflect the FILR numerical scale, as follows:

ACTFL/ FILR Level	Coded as:
Novice-Low/0	0.2
Novice-Mid/0	0.5
Novice-High/0+	0.8
Intermediate-Low/1	1.0
Intermediate-Mid/1	1.5
Intermediate-High/1+	1.8
Advanced/2	2.0
Advanced-High/2+	2.8
Superior/3	3.0
High-Superior/3+to 5	3.8

This system of score coding is intended to assign an appropriate numerical value to the proficiency level descriptions. For example, proficiency at an Advanced-High/2+ level is characterized by many of the same features as at the Superior/3 level, though the examinee cannot sustain the performance. Thus, the numerical interpretation should fall closer to 3.0 than mid-way between 2.0 and 3.0, as might be expected.

Analyses of HaST Reliability

The several tables below provide descriptive statistics, interrater reliabilities, and parallel-form reliability data obtained in the study.

Table 2 shows the mean rating, standard deviation, and other descriptive statistics for each of the two raters on each of the SOPI test forms.

Table 2.   Descriptive Statistics for Scoring Levels Assigned

Test Form	Rater	Minimum Score	Maximum Score	Mean	Standard Deviation
Form A	(n=13)				
	Rater 1	0.2	2.8	1.54	0.75
	Rater 2	0.5	2.8	1.53	0.65
Form B	(n-13)				
	Rater 1	0.2	3.0	1.61	0.66
	Rater 2	0.5	2.8	1.42	0.65

The mean ratings for each rater of the Form A examinee response tapes were very similar. However, on Form B, Rater 1 appears to have awarded slightly higher scores than Rater 2, as shown by her slightly higher mean ratings.

Table 3 shows the frequency of the 52 scores awarded to this sample across raters and forms (i.e., 2 raters x 2 forms x 13 examinees).

These figures illustrate the difficulty of locating suitable examinees to take the HaST. 20% of the ratings assigned were at the Novice levels, indicating that these examinees were below the suggested Intermediate Low minimum level for which the test was intended. Only 22% of the ratings were above the Intermediate level and only one Superior rating was awarded. However, there was quite a range in performances.

Table 3. **Frequency Distribution of All Ratings Across 13 Subjects, 2 Raters and 2 Forms**

	Rating	Frequency	Percent
0.5	Novice Mid	3	6
0.8	Novice High	5	10
1.0	Intermediate Low	7	13
1.5	Intermediate Mid	10	19
1.8	Intermediate High	14	27
2.0	Advanced	6	12
2.8	Advanced High	4	8
3.0	Superior	1	2
	Totals	52	101*

*due to rounding

The degree of agreement between the absolute ratings awarded was relatively high for these inexperienced raters. There was total agreement in 46% of the 13 paired ratings on Form A. In only one case was the disagreement greater than one step on the ACTFL scale; here, one examinee was awarded a Novice-Low by Rater 1 and a Novice-High by Rater 2. For Form A, in 92% of the cases there was either complete agreement or a difference of one step on the scale. On Form B, there was total agreement in 31% of the 13 paired ratings. Again, only one of the ratings was more than one step away from the rating awarded by the other rater.

Correlations between the ratings assigned by Rater 1 and those assigned by Rater 2 for the two SOPI test forms are shown in Table 4 below. The first is the Pearson product-moment correlation coefficient, and estimates the interrater reliability. The second, presented in parentheses, is the Spearman rank order correlation coefficient which is not affected by disagreements in score, only by disagreements in rank ordering. Since the two raters were inexperienced in rating Hausa speech samples, the rank order coefficients may give a better indication of how more experienced raters might perform. It may also be noted that the product-moment

correlation with a small sample may be heavily influenced by extreme values. The rank order correlations are less susceptible to extreme values. These correlations, both on the absolute scale and in terms of rank order, are quite high across both test forms.

Table 4.   Interrater Reliabilities

Test Form	Correlation
A (n=13)	.88 (.95)
B (n=13)	.93 (.95)

Table 5 presents correlations for the same subject taking two different test forms, with the same rater scoring both forms. These can be considered parallel form reliabilities. Rank order correlations are given in parentheses.

Table 5.   Parallel-Form Reliabilities (Same Rater)

	Rater 1	Rater 2
Forms A and B (n=13)	.82 (.95)	.80 (.92)

The numbers above indicate that either the rating scale may have been inconsistently applied by the raters or that some examinees did indeed perform differently on the two test forms. This can occur when an examinee attempts to do his or her best on the one form due, perhaps, to interest in the initial testing experience, but fails to make such effort when taking the second form.[4]   In terms of relative ranking, the two tests placed the examinees in basically the same order for both raters. The fact that the rank-order parallel-form reliability was quite high for the two different raters supports the claim that the sample of speech elicited

by different forms consistently differentiates among performances, even if raters are inconsistent in which absolute score they assign each performance.

Table 6 shows parallel-form reliabilities for subjects taking two different test forms, with each form scored by a different rater. (Again, rank order correlation coefficients are given in parentheses.)

Table 6. Parallel Form Reliabilities (Different Forms and Raters)

Rater/Form Combination and Correlation

Rater 1/Form A - Rater 2/Form B (n=13)	.91 (.95)
Rater 1/Form B - Rater 2/Form A (n=13)	.76 (.91)

This type of parallel-form reliability involves error that can be attributed to natural variation in examinee speech, error that can be attributed to differences in test form, and error that can be attributed to differences in raters. Thus, it may be viewed as a lower-bound estimate of the reliability of a HaST score. Although the reliabilities were not always impressively high regarding absolute ratings (i.e., the two raters at times differed both within and among themselves in severity), even under these severe conditions (different forms and different raters), the ability of the raters to place the examinees in very nearly the same rank order on the basis of the examinees' performance on the HaST is impressive.

Analyses of HaST Validity

As mentioned earlier, the HaST raters were asked to rate each item (i.e., the warm-up, the four picture items, the five topic items, and the five situation items) in terms of its usefulness in making the holistic rating for that examinee. The rating scale for item usefulness ranged from 1 (lowest) to 5 (highest), with the midpoint (3) defined as "adequate." There were 15 such ratings per examinee on each form. The mean rating given by the two raters across the 13 subjects for all the items on Form A was 3.27 and on

Form B it was 3.15. These mean ratings of usefulness indicate that in the opinion of the raters, the individual items were adequate in eliciting a ratable speech sample from the group of examinees in the validation study.

For the purposes of testing the hypotheses stated above (concerning the ability of the HaST to probe proficiency at the different ACTFL levels), it would have been best to have been able to divide the sample into groups of Intermediate, Advanced, and Superior level subjects. However, as noted above, the sample that took the Hausa test turned out to be unexpectedly low in average proficiency. Thus, for data analysis purposes the thirteen examinees were divided into three groups on the basis of similar proficiency ratings. Group 1 contained five individuals who, across both HaST forms and across both raters, had received proficiency ratings ranging between Novice-Low (0.2) and Intermediate-Mid (1.5). The mean score of group 1 members across raters and across forms was .87. This is nearest to a score of Novice High on the ACTFL scale. Group 2 contained five individuals who had received proficiency ratings at Intermediate Mid (1.5) or Intermediate High (1.8). The mean score of this group across raters and forms was 1.70, nearest to a score of Intermediate-High on the ACTFL scale. Finally, group 3 contained three individuals whose proficiency ratings ranged from Intermediate High (1.8) to Superior (3.0). The mean score of this group across raters and forms was 2.42, about midway between Advanced and Advanced-High on the ACTFL scale.

To examine the hypothesis depicted in Figure 1, it is necessary to examine the mean ratings by intended level of the item. For this analysis, all ratings were combined; i.e., scores for each individual examinee from both raters were averaged for each item, and then the average for all items at that intended level was computed. Thus, each subject had three pieces of data: his or her average on the eight Intermediate, sixteen Advanced and four Superior level items that comprised the two forms of the test. Then, the means for each of the three proficiency groups were calculated. These mean ratings are given in Table 7.

Table 7.   Mean Group Performances on Items

Proficiency Group	Intended Item Level		
	Intermediate (8 items)	Advanced (16 items)	Superior (4 items)
1 (n=5)	0.914	0.948	0.833
2 (n=5)	1.553	1.626	1.622
3 (n=3)	1.835	2.227	2.542

These mean ratings are also presented in the diagram in Figure 2.

Figure 2
Actual Mean Performance of
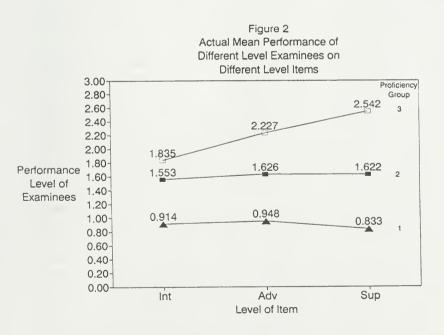Different Level Examinees on
Different Level Items

Figure 2 illustrates that the actual results appear to be similar to the hypothesized outcome. To test for the statistical significance of the results, a blocked repeated measures analysis of variance as a multivariate analysis of variance (MANOVA) was conducted using SAS. First, the test for an effect of the interaction of proficiency grouping and item level on examinee performance was significant (Wilks' lambda $F_{(4,18)}$=9.86, p=0.0002). Next, the test for any main effect of the different item levels on examinees was also significant (Wilks' lambda $F_{(2,9)}$=24.55, p=.0002). Thus, performance differed by intended item level across examinees. This indicates that the three groups were NOT equally affected by the different item levels. (If this statistic had not been significant, then the three lines in Figure 2 would be parallel.) Finally, the test for any between subject effect (i.e., difference due to proficiency grouping) was significant ($F_{(2,10)}$=34.30, p=0.0001). This indicates that the three groups performed differently from each other across the three item levels.

A pairwise comparison of means (Bonferroni T tests) across the three item levels reveals that the only difference in performance at any item level that was NOT significant was between groups 2 and 3 at the Intermediate item level. The mean for group 2 here was 1.553, while the mean for group 3 was 1.835. This result further supports the hypothesis that higher level examinees need items at higher levels on the proficiency scale in order for their different ability levels to be separated from each other. Had the mean proficiency of each the three groups been equal to Intermediate, Advanced, and Superior, no difference in performance on the Intermediate level items across the three groups would be expected. However, in this analysis, the mean overall performance of group 1 members was below the Intermediate level. (Recall that the mean overall rating of group 1 members was .87, which is about Novice High.) Thus, it is not surprising that group 1 scored significantly lower than groups 2 and 3 on the Intermediate level items. Likewise, had the proficiency of the three groups been equal to Intermediate, Advanced and Superior, no significant difference on the Advanced level items between groups 2 and 3 would have been expected. However, the average overall performance of group 2 members was below the Advanced level. (Recall that the mean overall rating of group 2 members was 1.70, or about Intermediate High.) Thus, it is not surprising that group 2 scored significantly lower than group 3 on the Advanced level items.

The hypotheses presented in Figure 1 predicted that for Intermediate level examinees there would be no difference in their scores across the three item levels, but that there would be an item level effect for the Advanced and Superior level examinees. To examine this, three separate single group repeated measures ANOVAs were conducted. The results indicate that there was no item level effect for proficiency group 1 (Wilks' Lambda $F_{(2,3)}$=4.63, p=.1211), nor for group 2 (Wilks' Lambda $F_{(2,3)}$=.94, p=.4825). However, there was a significant item level effect for proficiency group 3 (Wilks' Lambda $F_{(2,1)}$=554.21, p=.0300). This indicates that the lines in Figure 2 connecting the means for proficiency groups 1 and 2 should be considered statistically parallel. Considering that the mean of group 1 was in the Novice High range and the mean of group 2 was between Intermediate Mid and Intermediate High, these results do not disconfirm the original hypotheses. They do support the hypothesis that examinees at the Intermediate level remain at that level despite the ACTFL level of the item.

In summary, these findings are generally consistent with the hypotheses stated. Lower level examinees (group 1) perform at the same level across the various item levels. Given any of the HaST tasks, they would be rated lower than higher level examinees. However, higher proficiency students (group 3) would have received a lower holistic rating had they only been given Intermediate level items. Although they consistently performed better than the other groups at any item level, they needed the Superior level items to show the full extent of their ability. In short, these results indicate that the HaST items function as probes of each level as intended, and that the variety of item difficulties on the test are working to probe the examinee's overall ability to speak Hausa.[5]

In addition to providing some evidence for the validity of the HaST in a situation where concurrent validity with a face-to-face interview can not be obtained, the results of this study provide some initial support for the validity of the *ACTFL Proficiency Guidelines* as a hierarchy of performance descriptions of the speaking ability of learners of a foreign language. The items were written according to the content and speaking tasks described in the *Guidelines*. The fact that examinees were able to handle the content and speaking tasks in a way that matched the items' difficulty levels with the examinees' proficiency levels suggests that the hierarchy of tasks included in the descriptions is valid, at least for this limited sample. If the

Guidelines were without validity, then the higher level group in this study, whose mean holistic rating (2.42) was between the Advanced and Advanced High level, would not have performed any better on Superior level tasks than they did on Advanced or Intermediate level tasks. However, this was not the case.

In addition, the middle group (with a mean holistic rating at Intermediate-High) performed equally well and did not exceed the Advanced level on both Advanced and Superior items. The lowest group in this study (with a mean holistic rating of Novice-High) did not perform above the Intermediate level on Intermediate, Advanced or Superior level tasks. These results, including the fact that the low level students may have been disadvantaged by the Superior level items (Figure 2), indicate the necessity of including items on the SOPI at all levels of the ability range being tested.

DISCUSSION

Although this study was presented merely as an effort to examine the validity of the speaking tasks included on the HaST, it has been noted that the results have implications for the validity of the *ACTFL Proficiency Guidelines* as a representation of a hierarchy of skills, operationalized in the OPI. Although these results may be satisfying to those who have used the OPI and the accompanying *Guidelines* for a number of years, further studies of the *Guidelines*, making use of the methodology employed here, could be carried out. Such studies could employ certified raters and a larger sample of examinees. With a larger sample it would be possible to construct groups whose mean and range of proficiency more closely approximate the proficiency level that each group is intended to represent. With a greater spread in proficiency levels between groups, it is likely that the differences between groups in future pairwise comparisons would also be greater, if the *Guidelines* are valid.

The research methodology employed here may have broad application to the test development process. If the validity of the *Guidelines* is established through future research, then future efforts to develop SOPI tests based on the *Guidelines* can evaluate each item by comparing the performance of examinees at different proficiency levels . In such a case, if an item is intended to reflect

the Advanced level of the *Guidelines*, and Advanced and Superior level examinees do not score at the Advanced level, then the item might be revised or discarded, since it did not perform as it was designed to perform. Such a methodology could serve as a kind of item analysis that could be used for pretesting purposes. This methodology may be seen as a simple form of one parameter item response theory, with misfitting items being discarded.

The method may have further applications. If the *ACTFL Guidelines* are valid, then the method may be used to examine misfitting examinees. These would be examinees whose performance on individual items did not fit the model (for example, an Advanced level examinee who scores at the Intermediate level on a particular item). A comprehensive analysis of such individuals could provide a better understanding of any limitations to the validity of the *Guidelines*, as well as an understanding of the types of individuals for which the *Guidelines* are not valid. Thus, the methodology employed here may serve as the basis for a number of research studies on the *Guidelines*.

A further extension of this methodology beyond the sphere of the *ACTFL Guidelines* would be to present the speech samples, as individual segments, to native speakers of Hausa who are unfamiliar with the *Guidelines*. These Hausa speakers would be asked to rate each performance on a scale appropriate to the research. For example, they may be asked to make a rating from 1 to 7 for the degree to which the speaker demonstrates ability to communicate in Hausa. Would Superior level speakers, as defined by the *ACTFL Guidelines*, then outperform themselves on Superior level items (as opposed to Intermediate level items)? Would Intermediate level speakers be rated consistently across items at all three levels of proficiency? A positive outcome of such a study would support the contention that items can be at different proficiency levels, and that the hierarchy reflected in the *ACTFL Guidelines*, contrary to some criticisms in the literature, does reflect external judgments on proficiency made by native speakers of a language.

NOTES

[1]   Needless to say, there are some differences in some of the aspects of a speech sample elicited in a tape-mediated mode (the SOPI) and a direct mode (the OPI). Shohamy, Shmueli & Gordon (1991) have analyzed the speech samples of 10 examinees who were administered both types of tests in Hebrew. Although certain interactive discourse features were present in the OPI and absent in the SOPI, in areas such as syntax, morphology, lexicon, and amount of speech, there were no differences in the frequencies of occurrence between the samples collected by the two different elicitation procedures.   In addition, raters scored the examinees for proficiency similarly, whether listening to an OPI or a SOPI.

[2]   The local test development committee was spearheaded at CAL by Charles W. Stansfield, Project Director.   CAL testing staff included Dorry Mann Kenyon, Project Coordinator and Daniel Kennedy, Test Development Specialist.   Local Hausa language experts were Beverly Mack (George Mason University) and Steven Lucas (Voice of America, United States Information Agency).   The external reviewers of the HaST were William R. Leben (Stanford University), Roxanna Ma Newman (Indiana University) and Russell G. Schuh (University of California, Los Angeles).

[3]   Although Brod (1988) listed national Hausa enrollments as totaling 60 students, the vast majority of these students were enrolled in beginning level courses. In these courses, the teachers, depending on whether they are from the department of linguistics or anthropology, either teach the language analytically or focus on both culture and language. As a result, we were advised that most students of Hausa have oral language proficiency at the ACTFL Novice level.

[4]   In fact this appears to have happened.   Upon analysis of individual scores, one examinee who was awarded an Advanced-High by both raters on the first form taken received an Advanced and an Intermediate High rating on the second form.

[5]   Information on examinee attitudes toward the test was obtained as part of the validation study by means of a short questionnaire given to the subjects directly after completing the HaST.   All subjects completed the questionnaire, providing a 100% participation rate.

The first two questions sought to determine if the subjects felt their Hausa speaking ability had been adequately and fairly probed by the HaST. Eleven of the 13 subjects (85%) responded that the descriptions, narratives, situations, and other types of questions in the test were adequate to probe their maximum level of speaking ability in Hausa.   85% also indicated that there were not any picture/descriptions, narratives, situations, or other questions they felt were in any way 'unfair'. A small majority (54%) reported feeling unduly nervous during the test.   This is not surprising, since the test was above the actual proficiency level of many of the subjects and the semi-direct mode of testing was unfamiliar to the students. Twelve of the 13 subjects (92%) felt the length of the timed pauses for examinee responses was about right and 100% felt that the directions were clear. Finally, a large majority (77%) of the subjects felt that the two tests (Forms A and B) were equally difficult. This is important as the tests were designed to be alternate forms.

In summary, examinee reaction to the HaST was very positive, especially when one considers that the test tasks were inappropriately difficult for many

subjects. From the examinee's point of view the HaST probes Hausa speaking ability fairly and adequately, and it is technically sound.

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Appendix A: Scoring Scale for the HaST

NOVICE
The Novice level is characterized by the ability to communicate minimally with learned material. The HaST is designed for examinees who exceed this level. Any examinee not achieving the minimum ability to be rated at the Intermediate level will receive this rating.

INTERMEDIATE
The Intermediate level is characterized by the speaker's ability to:
- create with the language by combining and recombining learned elements, though primarily in a reactive mode;
- initiate, minimally sustain, and close in a simple way basic communicative tasks; and
- ask and answer questions.

Intermediate-Low
Able to handle successfully a limited number of interactive, task-oriented and social situation. Misunderstanding frequently arise, but with repetition, the Intermediate-Low speaker can generally be understood by sympathetic interlocutors.

Intermediate-Mid
Able to handle successfully a variety of uncomplicated, basic and communicative tasks and social situation. Although misunderstandings still arise, the Intermediate-Mid speaker can generally be understood by sympathetic interlocutors.

Intermediate-High
Able to handle successfully most uncomplicated communicative tasks and social situations. The Intermediate-High speaker can generally be understood even by interlocutors not accustomed to dealing with speaker at this level, but repetition may still be required.

ADVANCED   The Advanced level is characterized by the speaker's ability to:
- converse in a clearly participatory fashion - initiate, sustain, and bring to closure a wide variety of communicate tasks, including those that require an increased ability to convey meaning with diverse language strategies due to a complication or an unforeseen turn of events;
- satisfy the requirement of school and work situations; and
- narrate and describe with paragraph-length connected discourse.

Advanced-Plus   In addition to demonstrating those skills characteristic of the Advanced level, the Advanced Plus level speaker is able to handle a broad variety of everyday, school, and work situations.   There is emerging evidence of ability to support opinions, explain in detail, and hypothesize.   The Advanced-Plus speaker often shows remarkable fluency and ease of speech but under the demands of Superior-level, complex tasks, language may bread down or prove inadequate.

SUPERIOR   The Superior level is characterized by the speaker's ability to:
- participate effectively and with ease in most formal and informal conversation on practical, social, professional, and abstract topics; and
- support opinions and hypothesize using native-like discourse strategies.

High-Superior   This rating, which is not part of the ACTFL scale, is used in HaST scoring for examinees who clearly exceed the requirement for a rating of Superior. A rating of High-Superior corresponds to a rating of 3+ to 5 on the scale used by the Interagency Language Roundtable of the U.S. Government. The HaST is not designed to evaluate examinees above the ACTFL Superior level.

Appendix B: Structure of the HAUSA SPEAKING TEST (HaST)

Key: I = Intermediate
         A = Advanced
         S = Superior

Item	Intended Level	Speaking Task
Warm-up	I	Answer personal quesitons
Picture 1	I	Give directions
Picture	A	Narrrate in present time
Picture	A	Narrate in past time
Picture	A	Give instructions
Topic	I	Describe personal activities
Topic	A	State advantages and disadvantages
Topic	A	Give an explanation
Topic	S	Support an opinion
Topic	A	Hypothesize on a personal topic
Situation	I	Make simple requests
Situation	I	Make a complex request
Situation	A	Speak with tact
Situation	A	Make an apology
Situation	S	Give a brief informal speech
Wind down	I	

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A Problem for UG in L2 Acquisition

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It is shown in Klein (to appear) that in the process of acquiring pied-piping (PiP) or preposition stranding (PS) many adult L2 learners of English omit the required preposition from a WH question or a relative clause. The same learners are also shown to evidence the required subcategorization knowledge for the particular verbs which require prepositional complements. This "null-prep" phenomenon is robust among adult L2 learners of English, regardless of their L1. Because null-prep is questionable as a natural language phenomenon, the occurrence of the structure in the interlanguage of adult second language learners of English raises compelling questions concerning the relationship between Universal Grammar (UG) and L2 acquisition. In this paper, I further explore the phenomenon by testing children of contrasting L1s to see whether null-prep is a general acquisition phenomenon among L2 learners of English, and whether child learners, in contrast to adults, produce null-prep because of L1 transfer. Two hypotheses will be proposed to explain the results, one related to the input of the target language and the second to the acquisition process and its relationship to prior knowledge. Implications of these findings for a UG-based model of second language acquisition will be discussed.

INTRODUCTION

In earlier research reported in Klein (to appear), it was shown that adult L2 learners of English often leave out prepositions in constructions that require pied-piping or preposition stranding. It was found that if learners are presented with a declarative sentence as shown in (1a), they tend to correct it as in (1b), adding the required preposition:

(1)   a.*The girls talked the interesting movie yesterday
        b. The girls talked *about* the interesting movie yesterday.

However, the same learners often accept the related question and/or relative clause without the preposition, as shown in (2a) and (2b):

(2) *Null-Prep* (NuP)
Q: a.*Which movie did the girls talk yesterday?
RC: b.*Here's the movie (which, that, Ø) the girls talked yesterday.

This type of preposition omission has been termed the "null-prep" phenomenon, contrasting with correct instances of pied-piping and preposition stranding as shown in (3) and (4) respectively:

(3) *Pied-Piping* (PiP)
        a. About which movie did the girls talk yesterday?
        b. Here's the movie about which the girls talked yesterday.

(4) *Preposition Stranding* (PS)
        a. Which movie did the girls talk about yesterday?
        b. Here's the movie that the girls talked about yesterday.

L2 learners were shown to exhibit null-prep as an early stage in the acquisition of piping or stranding and some learners evidenced the phenomenon well into the high levels of English proficiency; that is, some learners advanced to mainstream American college classes and continued to accept null-prep. This appearance of null-prep in L2 extraction constructions has most recently been supported by Quintero (1992).

THE PROBLEM

The importance of null-prep in acquisition data is related to the fact that its occurrence is severely restricted in the natural languages of the world. Cross-linguistically, there are some languages which require a preposition in a declarative construction but allow the preposition to be omitted in the corresponding relative clause, though not in the related question. An illustration from Haitian Creole is shown in (5) - (7), with the required prepositions italicized:

(5)   DECLARATIVE:
        a. Twa zanmi - yo   ap pale   *de*   sinema sa   a.
           'Three friends-(pl) are talking *about* movie this (top).'

        b.*Twa zanmi - yo   ap pale   sinema sa   a.
           'Three friends-(pl) are talking movie this (top).'

(6)   QUESTION:
(PiP)   a. *De*   ki   sinema twa zanmi - yo ap pale   a?
           '*About* what movie three friends-(pl) are talking (top)?'

(NuP)   b.* Ki   sinema   twa zanmi - yo   ap pale   a?
           'What movie   three friends - (pl) are talking (top)?'

(7)   RELATIVE CLAUSE:
(PiP)   a.?Men sinema *de*   ki   twa   zanmi - yo ap pale
           'Here is movie *about* which three friends - (pl) are talking
             a.
             (top).'

(NuP)   b. Men sinema (que) twa   zanmi - yo   ap pale   a.
           'Here is movie (that) three friend - (pl) are talking (top).'

As shown in the contrasts between (5a) and (5b), the preposition is
crucially required in the declarative construction. Likewise, (6a)
shows that it is also required, in pied-piping form, in the
corresponding interrogative.   Null-prep in interrogatives is
disallowed as (6b) indicates. Interrogatives contrast with the relative
clause construction shown in (7) where null-prep is the preferred
form.[1]

        Other prepositional languages which exhibit a similar pattern
include colloquial Brazilian Portuguese, Québécois and Montréal
French, some dialects of Northern Greek, Catalan, Venezuelan and
Puerto Rican Spanish, and Roviana, a language spoken in New
Georgia, Solomon Islands (Keenan & Comrie, 1977). Like Haitian
Creole, these languages require a preposition in declaratives but
permit the omission of that same preposition in relative clauses.
However, none of these languages allow null-prep in questions;
that is, null-prep interrogatives are always ungrammatical, as
illustrated in the Haitian Creole example shown as (6b).

It is evident now, that we are faced with an incompatibility between an interlanguage phenomenon, i.e. null-prep in L2 questions, and what appears to be a restriction on natural languages. The reason for this restriction, consistent with the detailed analysis presented in Klein (to appear),[2] is that null-prep represents a non-movement construction while question formation in null-prep languages generally results from syntactic wh-movement of an operator into Comp-initial position.

The arguments related to a non-movement analysis can be briefly summarized as follows:

Null-prep only occurs with an invariant complementizer. When an interrogative or relative pronoun appears, specifying wh-movement, null-prep is disallowed as shown in the following Brazilian Portuguese example from Tarallo (1983: 2) where the relative pronoun is italicized:

(8)   a.*André, *quem* eu gosto,   é mais bonito.
        b. André, whom I am fond, is more handsome.

By contrast, when a complementizer occurs instead of a moved relative pronoun, null-prep is readily permitted as in (9):

(9)   a. André, *que* eu gosto   é mais bonito.
        b. André, that I am fond, is more handsome.

Tarallo argues that this contrast is further supported by the "resumptive pronoun variant" which also uniquely occurs with the *que* complementizer and results from a "non-movement strategy." Therefore the relative pronoun shown in (10) does not permit a resumptive construction, while the complementizer in (11) clearly allows it:

(10)   a.*André, *quem* eu gosto   *dele*   é mais bonito.
        b. 'André, whom I am fond   of him is more handsome.'

(11)   a. André, *que* eu gosto   *dele*   é mais bonito.
        b. 'André, that I am fond   of him   is more handsome.'

Claims for a non-movement analysis are further elaborated by Ingria (1979; 1981) for Greek, where the relative pronoun/ complementizer contrast also holds. Specifically, null-prep only

occurs in constructions where a Greek complementizer is present, never with a moved relative pronoun. Ingria argues that this non-movement/movement distinction is most compelling when we note that only the construction with the complementizer permits subjacency violations.[3]

From these facts, and others reported in Klein (to appear), the object in a null-prep phrase represents a non-lexicalized pronominal, rather than the *trace* of wh-movement (see below). In addition, the null-preposition is argued to be very weak; in fact, it is analyzed as a bound morpheme which attaches itself to its (null) object.[4] Crucial to my argument here, Universal Grammar (UG), the system of innate, constrained, parameterized principles instantiated in the minds of first language learners,[5] specifies restrictions on the licensing and governing of null-elements in the form of the Empty Category Principle (ECP). The ECP, discussed in Chomsky (1981) and elaborated by Lasnik & Saito (1984), among others, specifies that a wh-*trace* (though not an empty pronominal) must be *properly governed*.[6] Further, the *trace* of a moved element requires proper government by a strong preposition, if permitted at all;[7] thus, a very weak or null preposition would not provide the required government relation for the empty category. Null-prep in movement constructions, therefore, represents a violation of the ECP and is outlawed by UG. In addition, null-prep appears to violate the principle of Recoverability of Deletion (Chomsky & Lasnik, 1977; Chomsky, 1986), a principle which severely constrains the grammatical deletion of elements.[8] It is not surprising, then, that null-prep questions have been unattested in natural languages, even those which permit null-prep in (non-movement) relative clause constructions.

These natural language claims entail direct consequences for the interpretation of the relevant L2 data. They also illuminate the importance of this area of research activity for a principled theory of second language acquisition.

Acquisition researchers have argued that every stage of a learner's transitional competence must represent a grammar possible in some natural language, i.e., specified by UG, although each interim grammar may not necessarily match the specific target language of the learner. Therefore, errors are to be expected, but "wild" grammars, unconstrained by UG, are not predicted to occur in either L1 (Goodluck, 1986) or L2 acquisition (for example, Liceras, 1985; Schwartz, 1987; White, 1989). An accumulation of

evidence of null-prep in L2 questions and movement relatives, in violation of UG, thus provides direct counter-evidence to these generally accepted acquisition claims. If L2 learners are violating UG principles, then researchers must investigate the precise aspects of UG which are missing, how and why this occurs, and how learners actually do create their L2 grammars from the available input. Such questions would provide a compelling alternative to current UG-based theories of second language acquisition and clarify a very basic difference between L1 and L2 learning.

Within a broad program of research, the pilot study to be described below attempts to accumulate further evidence of this important phenomenon. Discussion will focus on which L2 learners create null-prep grammars and why they may be doing so. In the process, new questions are raised and new hypotheses are offered for future research on the subject.

THE RESEARCH QUESTIONS

My earlier research on null-prep in second language acquisition, summarized in Klein (to appear), reported robust findings among adult L2 learners of English, irrespective of their L1s; that is, language transfer did not appear to play a role in the occurrence of the phenomenon. Two related research questions are now posed:

1. Does null-prep also occur in child second language acquisition?
   If so, is the occurrence of null-prep influenced by L1 transfer?
2. What factors may be contributing to the occurrence of null-prep?

The first research question asks whether null-prep is related to the critical period; that is, whether it is unique to adult L2 acquisition or whether it also occurs among children, suggesting a more generalized acquisition phenomenon, for English at least. The secondary question asks whether children who exhibit null-prep do so because of transfer from their first language; this would be in contrast to null-prep among adult learners. The second research question asks why null-prep occurs; for example, there may be certain facts about English which propel learners to a null-prep grammar, or there may be certain facts related to language

processing and acquisition which cause the phenomenon. Discussion of this crucial question will be speculative but will provide impetus for further research.

METHOD

Subjects

There were 81 children, ages 8 and 9, who served as subjects for the experiment. All subjects attended grades 3 and 4 in the New York City (NYC) Public Schools. Fifty-eight of these were non-native speakers of English all of whom were receiving ESL instruction for 40 minutes every day. Equivalent proficiency levels were measured by means of a standardized test which had been administered to all subjects 5 months prior to this study.[9] Twenty-three native speakers of English, also ages 8 and 9, in grades 3 and 4, were tested as controls.

Materials and Procedures

As in my earlier experiment, a grammaticality judgment and correction task was administered to subjects by their classroom teachers, all of whom were graduate (MA) students working under my supervision.[10] A test of 54 sentences was given to small groups over several sessions. Because L2 learners may differ in their proficiency depending on modality, sentences were presented to all subjects both orally and visually. After a practice session, subjects were asked to judge whether sentences on the test were *good* (i.e., grammatical) or *bad* (i.e., ungrammatical). If a sentence was judged *bad,* the subject was to correct it. As shown in (12), subjects were presented with target sentences of three types, declaratives, questions, and relative clauses, randomized throughout the test. Lexical items remained constant across the sentence types and the preposition was always absent in the target sentences:

(12)   a. The silly clown is dancing the big doll tonight.
        b. Which doll is the silly clown dancing tonight?
        c. This is the doll that the silly clown is dancing tonight.

If a subject accepts (12a) as correct, it is coded as inaccurate subcategorization for that verb and (12b) and (12c) are not analyzed for that subject. However, if she rejects (12a) and corrects it by adding a preposition, she is considered to have the necessary subcategorization knowledge for (12b) and (12c). That is, she knows that the verb in this instance requires a prepositional phrase (PP) complement. If the same subject then accepts (12b) and/or (12c) as correct, those responses are coded as null-prep. A correct response involves adding a preposition in piping or stranding position. Also included in the test were equal numbers of correct piping and stranding sentences for subjects to judge, such as those shown in (3) and (4). In addition there were an equal number of ungrammatical distractor sentences where the error was other than an omitted preposition, as in (13):

(13)   Did the girls watched a television show last night?

For this part of the study we compared two contrasting L1 groups, Spanish and Haitian Creole speakers. Haitian Creole, as shown in (5) - (7) permits null-prep only in relative clauses and requires pied-piping in questions. Spanish, on the other hand, permits only pied-piping for both questions and relatives;[11] neither language permits preposition stranding. If there is a transfer effect from the L1, we would expect the Spanish speakers to do significantly better in relative clauses than the Haitian Creole speakers where null-prep is permitted in the L1; that is, the latter group would be expected to evidence null-prep in English relatives, accepting more deviant sentences than the former group who would be expected to pied-pipe. In questions, we would predict the two groups to be comparable.

RESULTS

The results are shown in Table 1. First, the control group of native speakers accepted null-prep to a far lesser degree than did the non-native speakers. To the extent that null-prep did occur, slightly more so in questions than relative clauses, we can account for the results by appealing to performance mistakes in a test situation.[12] In general, the native speaker results show: (a) That, for the most part,

children of this age were able to perform the task although some found it difficult; and (b) that children who are native speakers of English do not exhibit a deviant, i.e., null-prep, grammar. By constrast, it is clear that null-prep occurs to a much greater extent among child L2 learners of English.

Table 1.   Null-Prep Results for Native Speakers and Non-Native Speakers

S-type	N-subj	% subcat	mn NuP	mn PiP	mn PS
NS: Q	23	75	12	0	87
RC	23	75	9	0	89
HC: Q	17	61	24	0	54
RC	17	61	21	0	67
Span: Q	20	23	33	0	47
RC	20	23	47	0	36

S-type=sentence type;   N-subj=number of subjects;   %-subcat=percentage of accurately subcategorized declaratives across total tested; Mn NuP=mean percentage of null-prep acceptance in possible null-prep trials; Mn PiP=mean percentage of pied-piping; Mn PS=mean percentage of preposition stranding; NS=Native speakers of English;   HC=Haitian Creole speakers;   Span=Spanish speakers;   Q=questions; RC=relative clauses.

Further, as shown in Table 1, the results for relative clauses are exactly the opposite from what might be expected if L1 transfer were occurring. The Spanish speakers accept null-prep at a mean of 47% while the Haitian Creole speakers accept it only at a mean of 21%, with more than 50% fewer null-prep acceptances.   In questions, the differences are not as great, but the pattern also shows the Spanish speakers to be accepting more null-prep constructions than the other group. In addition, it must be noted that there is a great discrepancy in the number of accurate subcategorizations in the two groups: 61% for the Haitian Creole speakers and only 23% for the Spanish speakers. In general, then,

the Haitian children seem to be more proficient (in this area of language development at least) than the Spanish-speaking children, even though the two groups were at the same level of language proficiency five months earlier. This finding will be discussed in the next section.

There was another interesting result reflected in Table 1. Like the native speakers who showed no evidence of pied-piping, the non-native speakers never made a correction by placing the preposition in initial clause position; they chose only the stranded option. This is quite remarkable considering the fact that both Haitian Creole and Spanish speakers clearly have piping in their native languages; as noted above, only piping is permitted in the questions of both languages and preposition stranding is disallowed.

This preference for stranding was further supported when I analyzed the results of the correct piping sentences to see if any were rejected and changed to stranding. The results of both native speakers and non-native speakers are shown in Table 2.

Interestingly, native speakers rejected piping, changing it to stranding, at a mean of 46% overall and the Haitian Creole speakers rejected piping at a mean of 38% in questions, and at a much lower percentage in relatives. The Spanish speakers generally did not reject correct sentences. Switches from stranding to piping were almost non-existent. Quintero (1992) reports similar preferences for stranding among adult Japanese ESL learners even though Japanese does not permit stranding.[13] Potential reasons for such findings are discussed below.

Table 2. **Rejection of Piping (PiP) Versus Stranding (PS) by Native Speakers and Non-Native Speakers.**

S-type		Mn% PiP→PS / →NuP		Mn% PS→PiP / →NuP	
NS	Q	42	3	2	1
	RC	50	8	1	0
HC	Q	38	0	3	0
	RC	9	29	0	6
Span	Q	2	0	0	0
	RC	1	0	0	0

S-type=sentence type; Mn%PiP→PS/→NuP=the mean percentage of correct instances of pied-piping (PiP) that were changed to preposition stranding (PS) or null-prep (NuP) out of total possible accurate subcategorizations, Mn%PS→PiP/→NuP=the mean percentage of correct instances of preposition stranding (PS) that were changed to pied-piping (PiP) or null-prep (NuP) out of total possible accurate subcategorizations; NS=native English speakers (N=23); HC=Haitian Creole speakers (N=17); Span=Spanish speakers (N=20); Q=questions; RC=relative clauses.

DISCUSSION

The results show that children, as well as adults, exhibit null-prep. Thus, in answer to the first research question posed above, the null-prep phenomenon does not appear to be constrained by the critical period for language acquisition. Secondly, like adult learners, children learning English as an L2 do not appear to show transfer effects when they exhibit null-prep (and stranding).[14] We turn now to the second, and more compelling, question which asks why adult and now child L2 learners are permitting a null-prep grammar.

To account for the results discussed here, two hypotheses are proposed. The first attempts to explain the findings by invoking facts about English; the second relates to acquisition issues.

Hypothesis I: The nature of the English input propels L2 learners to null-prep and anti-piping. This is because of:

  a. the frequency of stranding and the potentially marked nature of piping in English;
  b. contradictory evidence for the presence/absence of prepositions.

This hypothesis relates to the occurrence of null-prep in adult and child L2 acquisition and the lack of piping in the child language data.[15] It suggests that properties of the English language lead L2 learners to misanalyze the input, producing null-prep; they also produce stranding rather than pied-piping, in direct contrast to their native languages. I now discuss each suggestion relating to the English input.

The part of the hypothesis indicated as (Ia) relates to the overwhelmingly disproportionate number of stranding sentences in English, as opposed to piping. This point is fairly obvious. In the oral language, particularly, the frequency or salience of stranding was argued by Bardovi-Harlig (1987) to account for its early acquisition among adult L2 learners; that is, they acquire stranding before piping. It has also been suggested (Erickson, 1984)[16] that young children rarely, if ever, hear piping in the input since it is limited to formal "adult" or written language. Erickson suggests, further, that preposition stranding in the input may cause learners to initially drop prepositions, i.e., produce null-prep, since stranding is such a "marked" structure (see below). Thus, learners who produce null-prep or acquire stranding rather than or before piping are, by some interpretations, over-riding markedness considerations.

Claims have been made in the linguistic literature that the typologically more frequent and syntactically less complex piping is the unmarked option across languages while stranding is very marked (Van Reimsdijk, 1978; Hornstein & Weinberg, 1981).[17] However, following Hyams' (1986) notion of relative degrees of markedness, it is argued in Klein (to appear) that piping in English is (linguistically as well as stylistically) more marked than piping in other languages, such as standard French; in such languages, stranding is not an option because prepositions are syntactically

weak and do not structurally govern as I claim prepositions do in English. Thus pied-piping is obligatory, as illustrated in (14):

(14)   [A qui] Emilie a t'elle parlé pp[e]
        'To whom did Emily speak?'

In English, however, prepositions are strong and, as proper governors, are permitted to license their empty objects as in the stranding example shown as (15):[18]

(15)   [Who] did Emily talk pp[to e]

In fact, English prepositions naturally strand in preference to attaching to their objects, in a clitic-like manner, and fronting, as pied-piping requires.

Native English speakers upon an abundance of positive evidence of stranding will, therefore, set the relevant parameters to result in the stranding option, and may never hear or pay attention to the more marked instances of piping. Only with enough evidence of piping will the learner reset to the marked language which includes both options.[19] For some native speakers, this never happens. That is, they consider English a stranding language and do not ever reset to the more marked option. In the few instances where piping is required (as shown in footnote 17), these speakers easily avoid the construction by using a paraphrase. The marked nature of English piping is also evidenced by the fact that, while some native speakers consider English to be a stranding-only language, those who might consider it a piping-only language are very rare and, perhaps, non-existent; almost all speakers who use piping do so only in alternation with stranding.

Similarly, some non-native speakers, once they recognize that English prepositions are very strong, easily use stranding and do not assume the more marked language which includes piping as well. Others select stranding as a possibility, with null-prep as the other option, perhaps in the belief that prepositions may be optionally omitted. Still others opt for null-prep exclusively. Their optional or unique choice of null-prep is potentially for the reason indicated in (Ib); that is, learners are confused by contradictory evidence for the presence/absence of prepositions.

This part of the hypothesis suggests that language learners exhibit null-prep because of evidence in the input that English allows

some prepositions to be optional and others to be omitted under certain conditions. Examples of such evidence appear as (16)-(19):

(16)   a. The small children climbed (over) the fence.
       b. Which fence did the small children climb (over)?
       c. That's the fence the small children climbed (over).

(17)   a. Ferdinand was complaining all day.
       b. What was he complaining *(about)?
       c. Here's the exam he was complaining *(about).

(18)   a. Lucy ate at that time.
       b. What time did Lucy eat?
       c. That's the time Lucy ate.

(19)   a. Lucy ate at that restaurant.
       b.*What restaurant did Lucy eat?
       c.*That's the restaurant Lucy ate.

Gruber (1965) and, more recently, Jackendoff (1985) cite examples such as (16) where a verb can subcategorize for an optional PP complement. This contrasts with (17a), where there is an implicit object and an incorporated preposition; in (17b) and (17c), however, the governing preposition must be overt.

The examples shown in (18) directly contrast with those in (19) and illustrate some lexically idiosyncratic structures that have been termed "bare NPs" by Larson (1985; 1987). Example (18a) shows that a preposition is required in the declarative form but may be omitted in the corresponding question (18b) and relative (18c). Similarly there is a required preposition in the declarative example (19a). However, omission of that preposition renders the corresponding question (19b) and relative clause (19c) ungrammatical. Bare NPs, although superficially like null-prep examples, are an entirely different phenomenon representing a highly-marked restricted class of temporal and locative nouns which permit the preposition to be omitted; other adverbial-like nouns require the preposition and the distinction seems almost arbitrary. Interestingly, while bare NPs are "exceptional" constructions, they are frequent enough in the input to easily mislead learners.

Now how does a learner cope with what appears to be such conflicting evidence regarding the occurrence of prepositions? This

is a particularly vexing question if learnability is to be explained by a parametric model of acquisition where positive evidence provides the necessary triggers for parameter-setting.   First language researchers including Valian (1990) and Roeper & Weissenborn (1990) have begun confronting this learning problem in the area of null-subjects where similar contradictory input serves as positive evidence for English learners. Valian proposes that learners have alternative settings of a parameter available and use hypothesis-testing to set parameters. Alternatively, Roeper & Weisenborn argue that positive evidence is relevant only within a "unique triggering domain" specified by an innate acquisition device; the evidence within such a domain unambiguously triggers the setting for a parameter and all other evidence becomes irrelevant and automatically ignored by the learner. Gass & Lakshmanan (1991) invoke the Roeper and Weisenborn hypothesis for second language acquisition. They suggest that L2 learners of English may differ from L1 learners by lacking the acquisition device needed to identify specific elements in the input to which a learner's attention should be drawn. It is possible, then, that L2 learners are overgeneralizing the absence of prepositions from evidence of bare NPs in the input; or they may be hypothesizing that prepositions are optional, since UG is not available to specify triggers for parameter setting.

        The possibility that the nature of the input is responsible for the appearance of null-prep has some support in L2 research. Tarallo & Myhill (1983) found that learners (from different L1s) learning a variety of second languages exhibited null-prep in German though not in other L2s. (There is something in the nature of the German input, which will not be discussed here, that Tarallo & Myhill argue is responsible for these incorrect null-prep forms.) In order to test hypothesis I then, we need to conduct further studies on the L2 acquisition of a variety of languages to see whether it is specific input which drives learners to null-prep rather than general L2 learnability processes as suggested by Quintero (1992).

        A second hypothesis to be considered here relates to the divergent results among the Spanish speakers and the Creole speakers in the study reported here. Recall that the Creole-speaking children did considerably better than their Spanish-speaking schoolmates: (a) By evidencing a much greater degree of subcategorization knowledge; and (b) by evidencing a much lesser degree of null-prep. This was the case even though the two groups were the same age and were at equivalent proficiency levels five

months prior to this test; they also lived in the same neighborhood and, therefore, could be argued to be from equivalent socio-economic levels.

One difference that is not accounted for is that almost all of the Haitian Creole speakers had been taught some French in Haitian schools before coming to New York. Thus for them, English was potentially an L3 and this may be the reason for their success on this language task. For the Spanish speakers, on the other hand, and other L1 learners we tested, English was the L2–and the Haitian Creole group surpassed them all. This suggests another hypothesis:

Hypothesis II: *Success on decontextualized tests of non-native language acquisition increases in proportion to the number (and perhaps types) of non-native languages learned.*

The age at which these languages are learned and the time span involved should be important variables. Intuitively, this hypothesis does not seem illogical but there has been little research on the subject. Eisenstein (1980) reports that children who had become bilingual before the critical period, particularly those who had learned the second language formally, did significally better as adults on foreign language aptitude tests than their monolingual counterparts. And trilinguals outperformed the bilinguals. Interestingly, the study of adult learners reported in my earlier research also lends initial support for this hypothesis. Of all the subject variables investigated, including length of time in the US, gender, handedness, mode of acquisition, there was only one that proved statistically significant: Those learners for whom English was a third or fourth language evidenced null-prep at a significantly lower mean percentage than L2 learners. Similarly, a study by Thomas (1988) showed that Spanish-English bilinguals learning French as an L3 outperformed monolingual English students learning French as an L2.

It may be the case, of course, that talented language learners are just those who choose to learn other languages–certainly correlation does not imply causation. However, the children tested in the NYC schools were not faced with any choices–they are all required to learn English. An interesting facet of the results may be relevant here: It was found that the Haitian children also tended to exhibit more analytic strategies than the other learners; that is, when the Spanish speakers judged a sentence ungrammatical, they often

could not correct it. On the other hand, when the Creole speakers judged a sentence ungrammatical, they tended to correct it decisively and without hesitation. This could suggest that they are better test takers which means that they are more likely to achieve the kind of grammatical accuracy necessary for standardized tests and school-related, decontextualized language tasks on which placement and achievement are often based. Like Eisenstein, Thomas (1992: 534) tested adults and concludes that bilinguals are better non-native language learners than monolinguals because the former "used their metalinguistic awareness to facilitate their performance on the tasks focused on language forms . . . ."

It will be important in future research to further support Hypothesis II by testing greater numbers of children and by comparing equal groups of L2 and L3 learners, preferably with matching L1s. Confirmation of this hypothesis would lead to some interesting new questions for acquisition researchers about L2 cognition and strategies and how these may be related to parameter setting and the operation of UG. Critically important implications for non-native language teaching programs follow as well.

CONCLUSIONS

The research reported here can be summarized as follows.
(1) Child L2 learners exhibit null-prep; therefore, the phenomenon is not an artifact of adult language acquisition. Null-prep does not appear to be strongly motivated by language transfer in child L2 acquisition; this is consistent with the findings of earlier research among adults.
(2) An input hypothesis has been proposed to explain the presence of null-prep and the absence of pied-piping in second language acquisition. That is, there are particular linguistic phenomena in English that motivate L2 learners to constrain, mishypothesize or overgeneralize application of target language rules.
(3) A hypothesis related to prior language experience has also been proposed to explain particular differences in the degree to which two groups of subjects, specifically Haitian Creole speaking and Spanish speaking children, show evidence of a deviant grammar. It is hypothesized that, all else being equal, bilingual subjects do predictably better at non-native language tasks than monolingual

subjects, success being directly correlated with the number of previous languages learned.

Investigation of these hypotheses and others will help determine the extent to which, and under what conditions, L2 learners exceed the bounds of UG, the central question for this research.

It was shown in studies of adults and children that null-prep appears in L2 relative clauses. According to the analysis sketched earlier, such data conform to UG only if the specified constructions do not involve wh-movement. To maintain support for a UG-constrained grammar, we would want to claim that L2 learners' early relatives are non-movement constructions. In fact, this is potentially quite plausible if we consider the evidence provided by some L1 researchers who argue that children learning English as L1 begin learning embedded questions and relatives by assuming non-movement (Roeper, Mallis & Akiyama, 1985; Nishigauchi & Roeper, 1987; Lebeaux, 1988; deVilliers, Roeper & Vainikka, 1990). Similiarly, L2 researchers have also hypothesized that second language learners may begin learning relative clauses as non-movement constructions (Martohardjono & Gair, 1989; Schachter, 1988; White, 1988). The non-movement hypothesis specifically related to null-prep relatives must now be tested in further research.

More compelling, however, is the appearance of null-prep in L2 questions, clearly wh-movement constructions.[20] Such evidence suggests that second language learners are creating an "impossible" language, "impossible" because it is not sanctioned by UG. In fact, null-prep in L2 questions provides clear evidence that some L2 learners create wild grammars along the route of their interlanguage development. In doing so, these learners appear to be outside of UG in some way, at least if we look at the relationship between UG and acquisition as it is currently posed.

However, many questions and issues remain. For example, it may be necessary to relax the criteria for strictly adhering to UG at every point in the developing grammar; that is, some (specified) deviations might be permitted in the L2 interlanguage (which, at any stage however, could become the end-state grammar). It is also possible that L2 learners are guided by some parts of UG and not by others, or that certain principles and parameter settings are more accessible than others, related to the availability of language-specific triggering data; such a possibility, of course, would argue for crucial distinctions between L1 and L2 acquisition.

It is also obvious that the precise nature of the target language input, as well as the learner's grammar, must be cautiously analyzed to determine how the former influences the latter, perhaps even propelling it outside of UG. It is always possible that, while surface evidence or learner intuitions indicate what appears to be a non-UG learner grammar, in-depth analysis of that grammar may suggest otherwise, or at least illuminate the strategies responsible for such deviation. For example, if null-prep in the L2 is the result of overgeneralizing from bare NPs, which are peripheral constructions (i.e., highly marked and very lexically idiosyncratic in English) learners are making the mistake of using the wrong data to create core constructions in their grammars; that is, while hypothesizing movement questions and relatives, learners may be incorrectly assuming all nouns to have the same exceptional features as bare NPs. While L1 overgeneralizations are also common, it would not be expected that evidence of null-prep among L1 learners be similarly attributed to the use of incorrect triggering data, but rather for other reasons, such as very early non-movement strategies. Importantly, then, non-native speaker retreat mechanisms for such errors as overgeneralization would have to be worked out (assuming the absence of negative evidence) especially since we know that retreat is inevitable for L1 learners.

And UG itself must also be questioned. In order to accommodate new acquisition facts, the relevant UG principles may need re-examination and reformulation; for example, in question here are the governing principles for empty categories and the principle involving recoverability of deleted elements. It is not unwarranted to suggest that extensive examination of null-prep in further acquisition as well as linguistic research may serve to motivate changes in linguistic theory.

ACKNOWLEDGMENTS

NOTES

[1] Preposition stranding is not permitted in Haitian Creole. In fact, PS is limited to Indo-European languages, primarily English and the Scandinavian languages and also occurs in Macedonian, a Slavic language (see Van Reimsdijk, 1978).

[2] I can only refer the reader to my forthcoming book to fill in the gaps which must necessarily be left out here and in other sections of this paper due to space limitations.

[3] According to linguistic theory, wh-movement always observes subjacency, a restriction on the number of constituents across which the wh-element may move to Comp position. The prohibition against violations of subjacency is often cited as evidence of wh-movement (for example, in Chomsky, 1981; Huang, 1984; 1987).

[4] The distinctions between strong and weak prepositions are interesting and complex and are discussed in Bouchard (1981, 1984) and Klein (to appear), among others.

[5] Researchers in second language acquisition are currently examining the possibility that UG is also accessible to L2 learners.

[6] Proper government is the relationship between an element *a* and an empty category ß such that *a* properly governs ß iff (a) *a* is lexical and governs ß, or (b) *a* locally A'-binds ß.

[7] Note that a trace in some languages may be governed by a strong preposition, which is what occurs in cases of preposition stranding in English, for example (cf., Hornstein & Weinberg, 1981).

[8] Following earlier work, Chomsky (1986) still argues that:

A principle of recoverability of deletion states that an element can be deleted only if it is fully determined by a structurally related phrase containing its lexical features or if it is a "designated element," where these notions have to be made precise . . . *to whom* could not be deleted in "the man to whom you spoke," because the preposition *to* is unrecoverable.

This principle suggests that null-prep in relative clauses as well as questions is problematic. However, it could be argued that the head of a relative clause with which the null-prep is co-indexed is available to potentially help identify and "recover" a deleted PP; such identification is only available in an interrogative construction if the verb subcategorizes for one and only one preposition.

[9] This test is the Language Assessment Battery (LAB) which is administered twice a year, in two forms, to all non-native speakers in the NYC school system. It is on the basis of this test that children are placed in appropriate ESL classes.

[10] This (second) test differed from the original in some respects: (1) A confidence-rating scale was administered in the first, but not the second test; (2) the second test was shorter and some of the lexical items used differed from the original in order to accommodate younger subjects. For these reasons, direct comparison of the adult versus child results will not be made.

11 Recall that some dialects of Spanish permit null-prep, i.e., Venezuelan and Puerto Rican Spanish. Subjects who spoke these dialects were excluded from the study.

12 In the adult study, native speaker controls accepted null-prep at a very low rate of 1% in questions and 2% in relative clauses.

13 In a production task involving extraction constructions, Quintero found that subjects beyond the early stages of acquisition produced stranding nearly 100% of the time; only one subject (who was at a later stage of acquisition) produced a few instances of piping. Prior to their accurate production of these constructions, Quintero's subjects exhibited a "no-prep" stage along with a pattern of resumption, as in *This is a car that the girl is singing about car'* (1992: 63). Quintero explains these results by appealing to learnability considerations. These include "cumulative development," which suggests an implicational order of acquisition, and "continuity" which argues for learners' early preferences for canonical word order, implying lack of wh-movement at the no-prep and resumptive stages of development.

14 An anonymous reviewer points out that it is possible that the Haitian Creole speakers are transferring 21% null-prep relatives from their L1 while the 40% null-prep relatives among Spanish speakers are the result of something other than transfer. While this may be true, it is very odd that the same creole speakers would not, to some extent at least, also transfer pied-piping (a correct form in both L1 and L2), which they do not do at all.

15 Piping was exhibited to a much lesser extent than stranding in the adult data as well, but the exact percentages have not yet been analyzed.

16 I thank Nina Hyams (personal communication) for providing me with this paper.

17 Some researchers claim that markedness relationships are not relevant to acquisition unless the related languages adhere to the Subset Principle. This principle (Berwick, 1985; Wexler & Manzini, 1986; 1987) proposes that when languages are nested one within the other, a learner, in the absence of negative evidence, will assume the smallest (subset) language compatible with the primary linguistic data she is exposed to. Only positive evidence of the larger language would trigger a resetting to the more marked, superset language. Therefore, if piping and stranding represent such nested languages, markedness values would naturally follow. However, the subset/superset relationship is not readily apparent here, although it could be argued that either piping or stranding is nested within a larger language which permits both constructions. In English this is complicated by the fact that some sentences require piping, as in i:

    i. You know the extent to which some politicians will lie.
    *You know the extent which some politicians will lie to.
Others require stranding, as in ii:
    ii.We visited the city where she is from.
    *We visited the city from where she is.
Most others permit both. Because of these complications, I leave open the potential application of the Subset Principle for consideration elsewhere.

18 Hornstein and Weinberg (1981) offer an alternative analysis, as suggested in footnote 7.

[19] The exact amount of evidence and the exact nature of the trigger needed to motivate the permanent setting of the parameter(s) involved are still open questions.

[20] Wh-questions representing non-movement are exceedingly rare in prepositional languages of the world.   One such example appears in Irish (McCloskey, 1979) involving a very syntactically complex construction which L2 learners would not presumably hypothesize. Furthermore, L2 learners beyond the beginning stages of acquisition readily produce wh-questions using variant interrogative pronouns (what, which, where, etc.) although, like L1 learners, they may evidence uninverted constructions as in i:

   i. Which book the girl is reading?

However, many L2 learners at intermediate levels of proficiency have acquired subject-aux inversion, suggesting a movement analysis for their questions.   Strong support for a non-movement analysis would come from evidence of questions where the wh-phrase remains *in situ*, as in many postpostional languages. This possibility is shown in ii:

   ii. The girl is reading *which book*?

There is little data, however, showing that such constructions are favored among second language learners, except perhaps at the very earliest stages of L2 proficiency.

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Learning to Understand in Interethnic Communication

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This is a cross-linguistic and longitudinal study of language acquisition in adult migrant workers who acquire a new language without any formal instruction. These learners are in the seemingly paradoxical situation of learning to communicate in order to learn. The aim is to investigate the ways in which adult second language learners use interactions with target language speakers to learn to understand. Evidence of non-understanding - the ways it is marked and the manner of its resolution - is used to shed light on 1) the way in which the interlocutors achieve a joint resolution of understanding problems and 2) the effect on the process of acquiring the second language. The findings can be usefully applied both in language learning classrooms and in training and support for those people who are routinely involved in inter-ethnic communications.

COMMUNICATING TO LEARN A NEW LANGUAGE

The relatively young but fast growing tradition of research on second language acquisition in adults exhibits three remarkable biases:

(1)   a rather heavy Anglo-Saxon diet in which English is most commonly the source or target language (cf. Ellis, 1985: 74);
(2)   an almost exclusive focus on studies with a cross-sectional design (cf. Klein & Perdue, 1988: 5);
(3)   most commonly the subjects who provide data are students with relatively high schooling and with formal second language instruction in the context of the classroom (cf. Bremer, Broeder, Roberts, Simonot & Vasseur, 1993: 158).

This study takes a different perspective. This is a cross-linguistic and longitudinal study of the language acquisition of adult migrant workers who acquired a new language without any formal instruction. Their acquisition processes were followed in a larger project initiated by the European Science Foundation (ESF, based in Strasbourg). The ESF project was carried out from 1982 to 1987 in Great Britain, Germany, the Netherlands, France and Sweden. A detailed description of the aims and design of the project is given in Perdue (1984; 1993a + b).

The cross-linguistic dimension of the ESF project is expressed in the study of five different target languages (L2) learned by speakers of six different source languages (L1). The corresponding L1/L2 pairs were combined in the following way:

L2:	Swedish	French	Dutch	German	English
	/ \	/ \	/ \	/ \	/ \
L1:	Finnish	Spanish	Arabic	Turkish	Italian	Punjabi

The longitudinal dimension of the ESF project involved monthly audio and video recordings of four informants per L1/L2 pair for a period of two-and-a-half years.

The ESF project focussed on the "synthesis" and "analysis" tasks language learners are confronted with (cf. Klein, 1986: 63-109). Synthesis tasks consist of turning meaningful units (sounds, words, etc.) which have been learned into understandable speech: e.g., locating the objects, person or events the learners want to talk about. Analysis tasks consist of segmenting the available input into meaningful units and bringing the resulting information in line with the situational context of the utterance. A summary of the analysis and findings carried out in the ESF project can be found in Perdue (1993b).

The present study builds on the work included in the ESF project by Bremer et al. (1988; 1993). The aim is to investigate the ways in which adult migrant workers use interactions with Target Language Speakers (TLS) to help them learn to understand the second language (L2). They are in the seemingly paradoxical situation of learning to communicate in order to learn. In particular, evidence of Non-Understanding (NU), the ways it is marked and the manner of its resolution, is used to shed light on (1) the way in

which understanding is achieved in interaction, and (2) the effect of this interaction on the process of acquiring the second language.

The focus in this study is on two Turkish and two Moroccan migrant workers acquiring Dutch who were asked three times (with an interval of one year) to participate in a role play task in which they had to apply for housing accommodation during the first three years of their stay in the Netherlands. For each of these four learners an analysis will be presented of three roleplays. The analysis deals with the way in which instances of non-understanding are marked within the interaction and solved (or not).

The structure of this study is as follows. First, the method of analysis will be presented: i.e., a specification of the research questions, a description of the data base, and an explanation of the theoretical framework by Bremer et al. (1988; 1993). Second, case studies are presented of the Dutch learners mentioned above. Third, these case studies are related to the cross-linguistic findings reported by Bremer et al. (1988; 1993). This analysis results in a number of generalizations regarding the issue of understanding in a second language and its relationship with interaction and acquisition.

METHOD

Research Questions

The research questions can be formulated as follows: 1) How are problems of understanding marked in interethnic communications between a non-native speaker and a native speaker of the target language? 2) What are the interactional procedures used by the interlocutors to achieve a joint resolution of understanding problems? 3) What are the interactional procedures that facilitate (or inhibit) second language acquisition?

Subjects

The subjects in this study are two Turkish adults, Ergün and Mahmut, and two Moroccan adults, Fatima and Mohamed. When they began participating in the ESF project, they had been living in the Netherlands for about ten months. Their ages ranged from 17 to 25. None had a Dutch speaking spouse or children of school age.

They had received little education in Turkey or Morocco. At the start of the project, their language proficiency in Dutch was very low. During their participation in the project they learned Dutch as a second language spontaneously, that is, without formal tuition. Basic sociobiographical characteristics of the informants are given in Table 1 (see Broeder, 1991: 14-17 for their detailed profiles).

Table 1: Basic sociobiographical informant characteristics*

	Ergün	Mahmut	Fatima	Mohamed
Sex	male	male	female	male
Year of birth	1964	1962	1956	1961
Place of birth	Ankara	Temürlü	Kenitra	Casablanca
Abode in SC	Ankara	Temürlü	Kenitra	Casablanca

Schooling in Sc:
    type
    # of years
	primary
	5
		primary
		5
			primary
			2
				secondary
				2

Employment in SC	motor mechanic	motor mechanic	seamstress	none
Arrival in TC	Oct. 1981	Dec. 1981	Sept. 1981	Feb. 1982
Temporary Schooling in TC	Education Center	none	Comm. Center	none
Temporary Employment in TC	factory worker	factory worker	kitchen maid	factory worker
Civil Status	single	married	married	single
Living with	Turkish family	wife	husband	parents
Date of Session 1	21-09-82	20-09-82	05-10-82	18-10-82
Estimated L2 Level at Session 1	very limited	almost zero	almost zero	almost zero
Other Languages	none	none	none	some French

* SC = Source Country: Turkey or Morocco; TC = Target Country: the Netherlands

Language Activities

The database for this particular study has been selected to reflect everyday encounters in which "learning through interaction"

might take place. In addition, the selected language activity should maintain some degree of comparability across the individual migrant workers and the specific sessions.

Applying for housing accommodation: The selected language activity is a semi-authentic roleplay with a male official associated with the municipal department of the housing office, which is chiefly visited by ethnic minorities. The subjects are given the following instructions in their first language (Turkish or Arabic):

> Take the role of a fiancé(e) who lives with a partner in the home of the parents. You have been registered with the housing agency for over one year, but still are not eligible for a house. Try to convince the official that the present living conditions are desperate because of continual parental quarrels and an intended marriage within three months. Something has to be done.

For each informant the roleplay is repeated three times: approximately one, two and three years after his/her arrival in the Netherlands. The roleplays are video recorded, which the participants are informed of beforehand.
        In session 2 and session 3 the housing official is a professional playing "his own role." In session 1, the role of the housing official is played by a non-professional: a social worker well-acquainted with the local housing situation of ethnic minorities. He is given the details about the role to be fulfilled by a housing official. This information was provided to the researchers by the professional who participated in the 2nd and 3rd sessions. The housing official, using a real application form from the housing office, discusses all topics relevant to filling in this form with the applicants (e.g., present living conditions, special circumstances, and urgencies).

Self-confrontation: An additional source of information is provided by self-confrontation sessions which took place one month after each of the roleplays. In the self-confrontation session the selected passages are then played back to the learner. First the subject is given time to react spontaneously after which the Turkish/Moroccan researcher asks more specific questions. The self-confrontation sessions are predominantly held in

Turkish/Arabic. The length and content of these sessions varies considerably depending on the encounter and/or the subject, nevertheless, these sessions afford a wealth of information (see Bremer et al., 1988: 22-51 for more details). These sessions were prepared by the Turkish/Moroccan researcher and the Dutch researcher. They jointly went through the video recording of the roleplay in order to locate and mark those places which are suitable for self-confrontation. The focus is on those passages which are unclear or where there are contradictions, and open or suspected understanding problems.[1]

MARKERS OF NON-UNDERSTANDING

In the theoretical framework provided by Bremer et al. (1988; 1993), the process of understanding is viewed as mutually constructed in the course of inferencing by the interlocutors. The conditions shift as either participant makes an adjustment to meaning. It is a dynamic process which is highly dependent on the context of the interaction. Claiming understanding in a specific interaction is justified if the interlocutor "acts creatively according to his interpretation of the interactional context" (Taylor, 1986). In detecting instances of non-understanding one faces the difficulty of distinguishing between lack of understanding and misunderstanding. Lack of understanding varies on a continuum from the (unlikely) possibility of absolutely nothing being understood to the interlocutors' belief that the degree of understanding is sufficient and satisfactory enough for the interaction to continue. Misunderstanding occurs when there is an illusion of understanding (cf. de Hérédia, 1986). Both sides act as if there is adequate understanding; incoming information is connected with already stored information, however incorrectly, in the terms of the interlocutor.

Understanding and non-understanding are displayed in the interaction through the "responsive treatment" of the "prior turn's talk." This implies that in analyzing the interaction "sequential implicativeness" is relied upon (cf. Sacks, Schegloff & Jefferson, 1974; Schegloff, 1987). Analyses have to be based upon sequences and turns within sequences. Learner behavior which may typically mark understanding problems includes five phenomena which will

be discussed in turn below (cf. Broeder & Roberts, 1988; Bremer et al., 1993).

Metalinguistic comments: These can be regarded as the most explicit indicators of non-understanding. The learner reflects upon the trouble source and gives a signal. These are either general requests (*Kun je 't nog een keer zeggen?* 'Could you repeat that please?') or refer to specific items in the previous talk (*Wat betekent X?* 'What does X mean?')

Reprises: Reprises are defined as taking up the other's word(s) through various kinds of repetition and reformulation (cf. Broeder, 1992). What is taken up varies greatly. It can constitute the learner's whole utterance or be part of it. Reprises may, with varying degrees of explicitness, deal with the trouble source. It can be centered on the part of the TLS' utterance which has been understood (i.e., the "keyword strategy") or on the part which has not been understood.

Minimal queries: These are conventionalized markers of understanding problems that most commonly are not sensitive to the specific linguistic context: for example, *sorry* ('sorry'), *wat?* ('what'), *welk?* ('which'), *ik?* ('me') and, *hoezo* ('why') in Dutch.

Minimal feedback: These are *ja* ('yes'), *nee* ('no'), and equivalents of "yes" such as *uh, huh, mm, yeah.* Indirect markers of non-understanding occur most frequently with simple positive feedback. These signals typically occur in linear phases (cf. Vion & Mittner, 1986), which may constitute evidence of non-understanding. Linear phases involve long stretches where the learner participates minimally and the TLS initiates topics and takes longer speaker turns. In contrast, parallel phases are characterized by full collaboration of the interlocutors.

Lack-of-uptake: This may be non-verbal: shoulder shrugging, various facial expressions, or "verbal" silence: laughter, coughing, or fillers such as *er, mm, you see.* The interpretation of these markers is highly context-dependent. After a direct question, lack-of-uptake is more likely to reveal non-understanding than occurring after, for example, declarative statements by the interlocutor. Only

post-hoc confrontation can clarify whether a lack-of-uptake signals disagreement rather than non-understanding.

In some self-confrontation sessions the subjects pointed out that they were frequently aware that they could not make sense out of what they heard. They preferred not to give a clear indicator of non-understanding for a number of reasons. Sometimes they wanted to keep the conversation going. The learners were faced with the problem of dealing with non-understanding in as efficient a way as possible without jeopardizing the interaction with continuous interruptions and off-topic metalinguistic side-sequences. Sometimes they wanted to save face, that is, protect their own "negative face" (cf. Brown & Levinson, 1978), in the sense that they did not want to be imposed upon by the TLS or expose themselves to the TLS. Sometimes they preferred the "wait-and-see" strategy (cf. Voionmaa, 1984). They waited for more input from the TLS in the hope that it would provide clues that would help decode the TLS-message.

Even though the learner might not wish to mark the understanding problem, the TLS may respond to learner behavior as if there is non-understanding. Therefore a distinction is to be made between two analytical categories: indicators of non-understanding (NU-indicators), and symptoms of non-understanding problems (NU-symptoms).

Indicators of Non-Understanding

NU-indicators are clear direct signs given by the learner that s/he is having difficulty understanding the TLS. An example of a metalinguistic comment which is used as an NU-indicator is given in sequence (1).

(1)
TLS: So you divorced twice?
Learner: *I do not understand, could you say that again, please?*
TLS: First married to one woman, then to another woman,
            now without woman?

Symptoms of Non-Understanding

Symptoms of non-understanding are of two types: either the learner conveys indirectly that s/he has an understanding problem,

or the TLS infers from the learner's response that there is a non-understanding. The focus is on the former, but it is often not possible to detect the difference between these two types of symptoms.

In sequence (2) the NU-symptom is a reprise and the TLS responds in accordance with the hypothesized intention of the learner.

(2)
TLS: So you divorced twice?
Learner: *Divorced twice?*
TLS: First married to one woman, then to another woman, now
          without woman?

In sequence (3) the NU-symptom is a minimal feedback item. The learner's behavior is most likely interpreted by the TLS as if the learner has not fully understood and therefore the TLS reformulates the assumed "trouble source."

(3)
TLS: So you divorced twice
Learner: *Yes*
TLS: First married to one woman, than to another woman, now
          without woman?

As "conversation analysts" we will never be sure whether the learner is having difficulty understanding in sequences (2) and (3). The learner may, in fact, have understood, may think s/he has understood, or may be in a total state of uncertainty about whether s/he has understood (or not). Nevertheless, in these cases, the markers of non-understanding are not part of learner strategy but instead trigger side-sequences because of perceptions and reactions by the TLS. Therefore, an interactional perspective in the analysis is crucial. This implies that evidence of understanding problems of the learner is based on the contributions of both the learner and the TLS.

FOUR CASE STUDIES

In this section the developing capacity of learning to understand in interactions with target language speakers is illustrated for two Moroccan and two Turkish adults acquiring Dutch as a second language. Those sequences are analyzed in which there is some "trouble" in the interaction, that is, where the stable and orderly properties are disrupted in some way. Either the learner or the TLS show by their verbal and/or non-verbal behavior that the learner might have an understanding problem. In addition evidence for non-understanding is based on post-session self-confrontations and by the interpretation of the data by the analyst. The learner behavior is described in terms of NU-indicators and NU-symptoms. The discussion in the previous section has indicated that this is not a watertight distinction, but it will be made for the sake of analytical clarity.

Fatima

Table 2 presents the absolute number of NU-indicators and NU-symptoms that were noted in the sessions with Fatima. The length of the session is measured in the total number of turns by the TLS and Fatima.

Table 2: Repertoire of NU-Markers used by Fatima

	Session 1	Session 2	Session 3
Number of turns	182	383	388
NU-indicators			
•metalinguistic comments	-	-	-
•minimal query	-	-	-
•reprise	1	2	1
•lack-of-uptake	-	-	-
NU-symptoms			
•reprise	-	-	-
•lack-of-uptake	5	24	20
•minimal feedback	8	10	4

Session 1: In the post-session self-confrontation Fatima explicitly
stated that she understood almost nothing in this session. However,
only one NU-indicator (a partial reprise as an implicit question) was
observed. Fatima simply did not indicate understanding problems
but kept reacting with minimal feedback. The result are long linear
phases. Several times Fatima's minimal responses were so illogical
that the TLS probably had to assume that Fatima did not understand
him. An example of a typical linear phase is given in sequence (4).

(4)

TLS:	Kun je niet zolang bij je vriend gaan wonen?	You cannot live with your friend for a while?
Fatima:	Ja^	Yes^
TLS:	Bij jouw vader en moeder?	With your father and mother?
Fatima:	Ja	Yes
TLS:	Ja	Yes
Fatima:	Ja	Yes
TLS:	Kun je daar niet zolang blijven?	You cannot stay there for a while?
Fatima:	Ja	Yes
TLS:	Totdat er 'n huis is	Until there is a house
Fatima:	Nee	No
TLS:	Waarom?	Why?
Fatima:	Ik wil mijn huis	I want my house
TLS:	Waarom? Waarom kun je niet naar je ouders?	Why? Why can you not go to your parents?
Fatima:	Daarom	That's why
TLS:	Ah dat is/ nee/ dat is geen mooi antwoord + Waarom niet?	Ah that is/ no/ that is not a nice answer + Why not?
Fatima:	+ Ik uh wil uh + vlug trouwt	+ I er want er soon marry
TLS:	Jij wil vlug trouwen?	You want to marry soon?
Fatima:	Ja	Yes
TLS:	Waarom?	Why?
Fatima:	Daarom <lacht>	That's why <laughs>
TLS:	++ En jouw vriend wat vindt die d'r van?	++ And your friend what does he think about it?
Fatima:	Met vader en moeder	With father and mother

In sequence (4) Fatima uses the positive minimal feedback
item *ja* ("yes") four times before he goes on and asks explicitly for
some arguments. Fatima cannot provide the housing official with
strong arguments which satisfy him. She even opts for formulaic
answers to the difficult "why-question": *daarom* ("that's why").

Session 2: In the second session (one year later) the housing official takes up a much easier position. In accordance with his role he tries to gain a thorough insight into the urgency of Fatima's need for housing accommodation. This results again in some rather long passages, in which the TLS is persistent in trying to solve the non-understanding. In these passages Fatima is not very explicit. She keeps reacting with minimal positive feedback and also some lack-of-uptakes can be observed. The housing official considers her reactions as NU-symptoms. Fatima hardly ever uses NU-indicators; when she does, they occur at the end of long sequences filled with understanding difficulties. More use of some explicit NU-indicators might help make the interaction less strained and more efficient. Also, an explicit indication that she has understood the TLS could have been helpful in reducing the number of long useless NU-passages. Sequence (5) is an example extracted from such an NU-passage.

(5)

TLS:	Heeft u nog vragen of niet?	Do you want to ask anything or not?
Fatima:	Ja goed	Yes good
TLS:	Heb je nog vragen?	Do you want to ask anything?
Fatima:	+	+
TLS:	Wilt u nog wat vragen of niet?	Do you want to ask something or not?
Fatima:	++	++
TLS:	Wilt u nog wat vragen?	Do you want to ask anything?

From the interaction itself it remains unclear what exactly causes the understanding problem. The TLS asks the same question several times, but Fatima's responses are not illuminating. However, the self-confrontation in Arabic (see sequence 6) reveals that Fatima misinterprets *vragen* ("asking") as *zeggen* ("saying").

(6)

Fatima:	*Gali wash candek matgoeli*	*He asked whether I have something to say*
SLS	*La* "hebt u nog vragen?"	*No* "do you want to ask something?"
Fatima:	*Wash bagga gadzidi dwi?*	*Do you want to keep on talking?*
SLS:	*La "wash candek shi asila?"*	*No "do you want to ask me a question?"*

Session 3: The third session with the same housing official
(which took place one year later) is comparable with session 2.
Again a dominance of instances of lack-of-uptake can be observed.
However, session 3 differs from session 2 in that Fatima does not
use laughing anymore as a means to handle non-understanding.
Sequence (7) is a typical example from session 3.

(7)

TLS:	Drie jaar wonen + je hebt 'n man + en 'n zoon + ja?	Three year live + you have a husband + and a son + yes?
Fatima:	+	+
TLS:	En je wil graag verhuizen. Je wil graag ergens anders naartoe. Wat wil je dan?	And you would like to move. You would to go somewhere else. What do you want?
Fatima:	++ Die huis	++ That house
TLS:	Je woont nu op de flat	You live now in the apartment
Fatima:	Nee	No
TLS:	Nu op de flat vind je `t niet leuk	Now in the apartment you do not like it
Fatima:	Nee	No
TLS:	Je wil iets anders	You want something else
Fatima:	Ja die ander	Yes that other
TLS:	Wat is dat?	What is that?
Fatima:	+	+
TLS:	Wat wil je dan?	What do you want?
Fatima:	++	++
TLS:	'n tent	a shelter
Fatima:	+	+
TLS:	of 'n caravan?	or a caravan?
Fatima:	Die + stad	That + city
TLS:	Wat wil je? ja	What do you want? yes
Fatima:	+ Misschien uh naast die centrum	+ Maybe er next to that center
TLS:	In `t centrum	In the center
Fatima:	Ja beter voor mij	Yes better for me

Conclusion Fatima: All three sessions are unbalanced in terms
of speaker distribution. Fatima contributes very little and there are
long, linear phases in which Fatima reacts with minimal feedback
and lack-of-uptake. These reactions are frequently interpreted by the
housing official as NU-symptoms. Occasionally Fatima uses
reprises to indicate non-understanding. The professional TLS in
sessions 2 and 3 is more persistent in his attempts to make himself
understood than the non-professional TLS in session 1.

Mohamed

Table 3 presents the absolute number of NU-indicators and NU-symptoms observed in the sessions with Mohamed.

Table 3: Repertoire of NU-Markers used by Mohamed

	Session 1	Session 2	Session 3
Number of turns	302	372	242
NU-indicators			
•metalinguistic comments	-	2	2
•minimal query	14	7	7
•reprise	1	4	4
•lack-of-uptake	-	-	-
NU-symptoms			
•reprise	-	1	4
•lack-of-uptake	6	4	6
•minimal feedback	-	-	-

Session 1: Although Mohamed excuses himself *ah sorry, ik spreek uh geen Nederlands* ("ah sorry, I don't speak er Dutch"), he manages to interact collaboratively with the housing official. Mohamed mostly indicates NU-problems through minimal queries: *wat* ("what"), *hm?* ("eh"), and *ik?* ("me?"). Reprises as NU-indicators concern the understood keywords. An example of his keyword strategy is given in sequence (8). Mohamed repeats the keyword *flat* ("apartment"). There seems to be partial understanding of the TLS.

(8)
TLS:	Waar wil je [wonen?]	Where do you want [to live?]
Mohamed:	[Als uh/] hm?	[If er/] eh?
TLS:	Waar wil je ergens wonen?	Where do you want to live somewhere?
Mohamed:	Uh ik woon in uh ++ Akkerstraat	Er I live in er ++ Akkerstreet?
TLS:	Ja daar woon je nu	Yes you live there now
Mohamed:	+	+
TLS:	Waar moet die flat staan?	Where should that apartment be?

Mohamed:	++ Flat?	++ Apartment?
TLS:	Ja	Yes
Mohamed:	+	+
TLS:	Waar wil je gaan wonen + straks als je getrouwd bent?	Where do you want to live + later when you are married?
Mohamed:	+++ Bij de + centrum	+++ By the + center

Sequence (8) also illustrates how Mohamed seems to rely on the wait-and-see strategy. Several instances of lack-of-uptake can be found where he seems to wait for a further delivery of the housing official. This sometimes results in sequences with long pauses.

At the end of session 1, Mohamed interrupts the interaction by using a formulaic "discourse stopper", *eventjes kijken* ("let's have a look"). Subsequently, he tries to recapitulate the outcome of the interaction in his own words. This is an effective strategy to check whether the general outcome of the interaction has been understood correctly (see sequence 9).

(9)

Mohamed:	Eventjes kijken ++ Als ik uh/ er/ ik kom uh + volgende maand ++/ ik moet over uh/ ik moet over uh/ over uh + anderhalf uh maand of uh zes weken	Let's have a look ++ When I I come er + next month ++/ I have to er/ I have to er/ about er + one and a half er + month or er six weeks
TLS:	Over zes weken ja	About six weeks yes
Mohamed:	Ik uh ++ moet uh/ ik moet 'n huis hebben	I er ++ have to er/ I need a house

Session 2: In the second session Mohamed is less cooperative than in the first session. Mohamed is surprised by the TLS's interrogation. After the roleplay he indeed wonders whether the housing official had the right to ask such detailed personal questions. Mohamed hardly ever takes the initiative for a new topic and is more cautious about giving appropriate contributions. Sequence (10) illustrates his typical responses.

(10)

TLS:	Heb je al 'n meisje?	Do you have a girl yet?
Mohamed:	Ja	Yes
TLS:	Ja hoe heet ze?	Yes what is her name?
Mohamed:	++ Petra	++ Petra

TLS:	Petra ja. Ken je ze allang?	Petra yes. Have you known her long?
Mohamed:	Hm? ja	Eh? yes
TLS:	Ja hoe lang?	Yes how long?
Mohamed:	+ Ah een jaar	+ Ah one year

After a question he waits a moment or reacts almost automatically with a minimal query: *hm?* ("eh?"). It is unlikely that he does not understand the TLS, and indeed, he proceeds with a cohesive response. Also Mohameds' use of reprises and metalinguistic comments as NU-indicators exhibits that he interacts less spontaneously and more thoughtfully. The reprises are reformulations of TLS-utterances or specific clarification requests in order to prevent inappropriate reactions. Sequence (11) shows how these reprises result in a kind of response-preparing behavior.

(11)

TLS:	En je woont bij je ouders? Wonen d'r nog veel mensen thuis of niet?	Are you living with your parents? There still live many people home or not?
Mohamed:	+ Waar? Bij mij ouder?	+ Where? with my parents?
TLS:	Ja	Yes
Mohamed:	Ja mij broers en mij zusjes	Yes my brothers and my sisters

Some lack-of-uptake's occur as NU-symptoms in this session. Also one reprise of the interlocutor's words is interpreted as a NU-symptom.

Session 3: During this session Mohamed is uninterested. He dislikes participating because he is irritated by the detailed personal questions of the official. He considers this interrogating as irrelevant for the present interaction, and he deliberately changes the topic. Consider sequence (12):

(12)

TLS:	Is je vader allang in Nederland?	Has your father lived in the Netherlands for a long time?
Mohamed:	Hm?	Eh?
TLS:	Je vader	Your father
Mohamed:	Ja mij vader vijftien jaar	Yes my father fifteen years
TLS:	Vijftien jaar + hm? Werkt ie nog?	Fifteen years + Eh? Is he still working?
Mohamed:	<knikt>	<nods>

TLS:	Ja + ja	Yes + yes
Mohamed:	Nou	Now
TLS:	Ja	Yes
Mohamed:	Met de flat	With the apartment

The interaction progresses slowly and consists of several linear phases. Mohamed pauses remarkably often before responding. NU-symptoms can be found at moments where it is unreasonable to suppose that he has some understanding difficulties, as in sequences (12)-(13), where an NU-symptom is followed by a complete cohesive response when the official explicitly asks whether there are any difficulties.

(13)

TLS:	En waar wil je in Tilburg wonen?	And where do you want to live in Tilburg?
Mohamed:	+++	+++
TLS:	Snap je wat ik bedoel?	Do you understand what I mean?
Mohamed:	Ja Stokhasselt	Yes Stokhasselt

Reprises that are used as NU-indicators can be interpreted in the same way as in the second session, i.e., as detail-directed response-preparing behavior where there is already some understanding (see sequence 14).

(14)

TLS:	Ben je alleen thuis of niet?	Are you alone at home or not?
Mohamed:	Nou?	Now?
TLS:	Ja [nog]	Yes [still]
Mohamed:	[nee]	[no]
TLS:	meer kinderen thuis of niet?	more children at home or not?
Mohamed:	+ Waar?	+ Where?
TLS:	Bij je vader?	With your father?
Mohamed:	Ja wij uh zeven	Yes we er seven

Conclusion Mohamed: In the case of Mohamed, understanding problems are mainly indicated by less explicit NU-markers. In the first session, some negotiation of meaning can be observed. In later sessions Mohamed is taking care of his "face." He is careful not to respond inappropriately. This picture of Mohamed is confirmed by the post-session self-confrontations, which he experienced as attempts to discuss the mistakes that he made.

Mahmut

Compared with the two Moroccan informants, Mahmut takes a very active part in the conversation in all three sessions. The number of NU-markers used by Mahmut is given in Table 4.

Table 4:   Repertoire of NU-Markers used by Mahmut

	Session 1	Session 2	Session 3
Number of turns	265	289	278
NU-indicators			
•metalinguistic comments	3	-	-
•minimal query	3	3	2
•reprise	13	2	-
•lack-of-uptake	-	-	-
NU-symptoms			
•reprise	2	-	-
•lack-of-uptake	-	-	-
•minimal feedback	2	3	-

Session 1: This session consists of parallel phases in which Mahmut and the housing official collaborate in making the interaction proceed. As a result NU-indicators hardly have a face-threatening effect for Mahmut. NU-symptoms that can be found include some reprises and minimal feedback items (*ja* "yes"). Sequence (15) shows how Mahmut overrides the TLS. Mahmut does not attend to the TLS-input and tries to continue with the topic he has introduced (i.e., "the rent of the house").

(15)

Mahmut:	Ander thuis + die normaal huis	Other home + that normal house
TLS:	Ja	Yes
Mahmut:	Die hoeveel kosten een maand?	That cost how much a month?
TLS:	Ja dat doet er niet toe maar daar kom je niet voor in aan-merking. Je hebt pas een kindje.	Yes that is not important but for that you will not be considered. You have had a baby for a short time.
Mahmut:	Oh een kindje + ja	Oh a baby + yes
TLS:	Alleen mensen met twee kindjes krijgen een huis	Only people with two kids get a house

Mahmut:	+	+
TLS:	En dan moeten ze nog drie jaar wachten	And then they have to wait for another three years
Mahmut:	+ twee kindje + ja + ik eenduizend gulden he die uh	+ two kids + yes + I one thousand guilders he that er
TLS:	Jij	You
Mahmut:	een duizend uh die betalen beetje	one thousand er they do not pay much

The NU-indicators used by Mahmut are most commonly reprises of the interlocutor's words. Several times his strategy is to focus on keywords.

(16)

TLS:	Heb je 'n huis?	Do you have a house?
Mahmut:	Heb je?	Do you?
TLS:	Of kom je hier voor 'n nieuw huis?	Or are you here for a new house?
Mahmut:	Nieuwe?	New?
TLS:	Kom je hier voor 'n huis?	Are you here for a house?
Mahmut:	Hier wonen?	Live here?

Apart from reprises Mahmut only uses the formulaic metalinguistic comment *Wat is dat?* ("what is that?") and the minimal query *ik* ("me") as NU-indicators.

(17)

TLS:	Is moeilijk he?	Difficult isn't it?
Mahmut:	Moeilijk ++	Difficult ++
TLS:	Wat ga je nou doen? Wat ga jij nou doen?	What are you going to do now? What are you going to do now?
Mahmut:	Wat is dat?	What is that?
TLS:	Wat ga jij nou doen?	What are you going to do now?
Mahmut:	Ik?	Me?
TLS:	Ja	Yes
Mahmut:	++ Ik uh volgende week terug komen	++ I er come back next week

Session 2: This session is structured very regularly by the professional housing official. For example, he says *ik zal even wat vragen voor de duidelijkheid* ("I'll ask a question for the sake of clarity") or he/she explicitly introduces a new topic and invites Mahmut to continue by saying *vertel 'ns* ("tell me"). The TLS tries

to get an accurate picture of the urgency of Mahmut's housing needs. Sometimes he asks Mahmut specific questions. However, he mostly leaves room for Mahmut's inclination to start monologues in which Mahmut provides abundant information about living conditions. In these linear phases the official is a cooperative and alert listener. Almost every propositional information provided by Mahmut is checked in detail by the TLS, mainly by means of reprises, as shown in the following sequence.

(18)

Mahmut:	Ja die daar pension	Yes there guest-house
TLS:	Ja Akkerstraat	Yes Akkerstreet
Mahmut:	Ja	Yes
TLS:	Vierenveertig	Forty four
Mahmut:	Zesenveertig	Forty six
TLS:	Ja daar woont u	Yes there you live
Mahmut:	Ja ik daar wonen eerst	Yes I was living there earlier
TLS:	Pension	Guest-house
Mahmut:	Eerst pension he	First guest-house he
TLS:	Eerst 'n pension	First a guest-house
Mahmut:	Ja eerst 'n pension	Yes first a guest-house
TLS:	Ja	Yes
Mahmut:	Tv-kamer dunner maken	Tv-room make thinner
TLS:	Ja kleiner	Yes smaller
Mahmut:	Ja kleiner maken	Yes make smaller
TLS:	Ja	Yes
Mahmut:	En dan in de he^ zo <gebaart>	And then in the eh^ so <gestures>
Mahmut:	/ in he	/ in eh
TLS:	doordemidden	in two
Mahmut:	Lange he of twee stukken maken twee kamer maken	Long eh or make two pieces make two room
TLS:	Ja doordemidden ja	Yes in two yes
Mahmut:	Twee kamer maken of dunne gedaan.	Make two room or done thin

Mahmut hardly uses any NU-indicators: only two reprises and two minimal queries (*ik* `me') occur. Also few NU-symptoms are observed.

Session 3: In this session as well, the TLS shows cooperative behavior. Even more than in session 2, the interaction consists of mainly linear phases. With his long monologues, Mahmut controls

the interaction completely. The official is overwhelmed with a torrent of information. However, Mahmut takes into account what is brought up by the official; the TLS's contributions are incorporated and dealt with appropriately. There are few difficulties with understanding. The opening sequence (19) of session 3 nicely shows the abundant contribution of Mahmut.

(19)

TLS:	Hallo	Hello
Mahmut:	Hallo	Hello
TLS:	+ Hoe is `t?	How are you doing?
Mahmut:	Goed. Ja bijna goed	Fine. Yes almost fine
TLS:	Bijna goed	Almost fine
Mahmut:	Ja	Yes
TLS:	Beetje goed. Nog niet helemaal goed?	Little fine. Not yet completely good?
Mahmut:	Nee niet helemaal. Uh mijn uh die huis uh probleem	No not completely. Er my er that house er problem
TLS:	Ja	Yes
Mahmut:	Niet probleem^ wel goed alles	Not problem^ yes fine everything
TLS:	Dan is wel alles goed?	Then everything is fine?
Mahmut:	Ja	Yes
TLS:	Hm. En wat voor een probleem was dat ook al weer?	Ehm. And what kind of problem did you have?
Mahmut:	Ja ik huis he. Die vele smalle die kamer he^	Yes I house eh. That very small that room eh^
TLS:	Ja	Yes
Mahmut:	Brede kamer	Wide room
TLS:	Ja	Yes
Mahmut:	Alles die slechte mensen wonen. En naast die disco he^	All that bad people live. And next to that disco eh^
TLS:	Ja	Yes
Mahmut:	Disco + hard muziek. Hard praten	Disco + loud music. Loud talk
TLS:	Ja	Yes
Mahmut:	Alles niet goed slapen	Everything not good sleep

Conclusion Mahmut: Mahmut turns out to be a good communicator. Even in the early stages, he is a talkative person in spite of the limited target language resources at his disposal. In the first few sessions, some NU-indicators and NU-symptoms were detected. In later sessions, he preferred to talk even more and relied on keeping in control of the interaction to reduce the non-understanding possibilities. This might explain why relatively few

traces of non-understanding could be found in sessions two and three. He frequently overrides the TLS by introducing a new topic and provides all necessary information beforehand, so that understanding problems on his part do not hinder the interaction. As a good communicator, Mahmut explicitly indicates understanding problems if he considers this interactionally appropriate. This strategic use of marking non-understanding is also confirmed by Mahmut's metalinguistic reflections in the post-session self-confrontations (see sequence 20).

(20)

SLS:	*Sen bir kimseyi iyi analamadıysan*	*Suppose you don't understand someone well?*
Mahmut:	*Tekrarlatırdım*	*I would make him repeat it*
SLS:	*Peki, o aynı kelimeyi kullanırsa?*	*Okay, and if he uses the same word?*
Mahmut:	*O zaman "bilmiyom" * diyecegim	*Then I will say "I do not know"*

Ergün

The number of NU-indicators and NU-symptoms used by Ergün is given in Table 5.

Table 5: Repertoire of NU-Markers used by Ergün

	Session 1	Session 2	Session 3
Number of turns	180	394	360
NU-indicators			
•metalinguistic comments	3	3	1
•minimal query	9	5	4
•reprise	5	10	8
•lack-of-uptake	-	-	-
NU-symptoms			
•reprise	1	2	-
•lack-of-uptake	2	2	4
•minimal feedback	3	8	3

Session 1: In this session Ergün apparently prefers to be on record rather than leaving understanding difficulties implicit. He uses a variety of NU-indicators, ranging from less explicit minimal queries to general metalinguistic requests. The order of NU-markers within a sequence is that first less specific NU-indicators occur. If these NU-indicators are not effective, Ergün opts as a last resort for explicit metalinguistic comments.

(21)

TLS:	Wat voor/ wat voor huis wil je hebben?	What kind of/ kind of house do you want?
Ergün:	He?	Eh?
TLS:	Wat voor huis wil je hebben?	What kind of house do you want?
Ergün:	Wat voor huis wil je hebben?	What kind of house do you want?
TLS:	Ja?	Yes?
Ergün:	+ Ik begrijp niet naam	+ I do not understand name

A typical example is the way Ergün re-uses the TLS's utterance; he tries to reconstruct the utterance. His reconstructions consist of (mostly partial) reprises that leave the structure and the prosodic features of the TLS's utterance intact. The reconstructions clearly help Ergün to process the information and help the TLS to negotiate understanding. Ergün's inclination to indicate understanding problems also affects the degree the TLS adapts. Some of Ergün's minimal feedback items and lack-of-uptakes might have been NU-symptoms. However, these are not considered as such by the TLS. It seems as if the TLS relies on Ergün's ways of indicating when NU's occur. In line with this, understanding problems are always accompanied by an NU-indicator.

Session 2: The TLS in session 2 is more willing to help Ergün than the one in session 1. This leads the TLS to react more often to his minimal feedback as NU-symptoms. As in the previous session, Ergün uses a variety of NU-indicators although less frequently than in session 1. It is remarkable that his interactional behavior has more face-saving features (that is, face-saving for Ergün). Ergün seems to compensate for the face-threatening explicit NU-indicators by stating that he understands the TLS and rejecting further clarifications offered by the TLS. For example he uses the general metalinguistic comments *ja snap ik wel* ("yes I understand"), and *ja dat begrijp ik wel* ("yes I understand that").

Another way in which Ergün shows his face-saving behavior is the way he "re-uses" the TLS's utterances. In session 1, the reprises of the preceding TLS-utterances were most commonly repetitions, almost imitations. In this session, re-using is done through well-considered repetitions and reformulations. In contrast with the first session, Ergün seems to check whether his understanding is complete. He highlights the keywords of the preceding TLS's utterance. It is a response-preparing strategy which provides him with a stronger guarantee of giving an appropriate answer.

(22)

TLS:	Is dat al bekend wie dat meisje is?	Is it already known who that girl is?
Ergün:	Meisje?	Girl?
TLS:	Dat meisje ja waar je mee wil gaan trouwen en gaat samenwonen	That girl yes whom you want to marry and live together
Ergün:	Ja trouwen ja ja trouw	Yes marry yes yes marry
TLS:	Ja wie/ wie is dat?	Yes who/ who is it?
Ergün:	Naam?	Name?
TLS:	Ja	Yes
Ergün:	Die is Hatice <lacht>	It is Hatice <laughs>
TLS:	Hatice	Hatice
Ergün:	Ja Hatice <spelt de naam>	Yes Hatice <spells name>
TLS:	Nog meer?	Anything else?
Ergün:	Nee achternaam?	No surname?

Session 3: In this session Ergün continues to use a variety of NU-markers but relatively less often than in earlier sessions. The same holds for metalinguistic comments and for response-preparing procedures. Instead, the reprises are now more integrated into the interaction. In these cases Ergün probably has some understanding and re-uses TLS's utterances to fill in the gaps.

Ergün regularly counters what has been brought up by the TLS. He succeeds in saddling the TLS with the burden of continuing if a breakdown threatens to occur. It is remarkable that Ergün regularly uses formulaic phrases through which he responds and continues the turn-taking. For example, he says *nou wat moet ik nou?* ("well what should I do now?") and, *dat is moeilijk* ("that is difficult"). As a result this session is more balanced compared with the two previous ones (where the TLS asked the questions and

Ergün gave the answers). Moreover, his face-saving behavior is more covert. A remarkable difference from the previous sessions, which clearly shows Ergün's developing face policy is his use of minimal queries. The form *welk?* ("which") has disappeared and instead Ergün now uses *hoezo?* ("why"). The latter form is also commonly and frequently used by TLS's. *Hoezo* is a more powerful and more productive means of resolving instances of non-understanding. It challenges the preceding utterance and can also be used in an elliptic phrase. Certainly for a non-target-language-speaker the use of *hoezo?* ("why") in stead of *welk?* ("which") has less face-threatening aspects when used as an NU-indicator.

(23)

TLS:	Mensen die op 'n kamertje wonen moeten daar ook eten	People who live in one room also have to eat there
Ergün:	+	+
TLS:	en verder wonen en slapen op een kamertje	and also live and sleep in one room
Ergün:	Een kamertje?	One room?
TLS:	Op een kamer + die zijn er wel die mensen	In one room + there are such people
Ergün:	Alleen een kamer?	Only one room?
TLS:	Ja die zijn er	Yes there are
Ergün:	Hoezo?	Why?
TLS:	Nou buitenlandse mensen die in 't pension wonen	Well foreign people who live in the guest-house

In the self-confrontation one month later Ergün comments on this sequence in Turkish. And he explicitly states why he uses *hoezo?* ("why") as an NU-indicator.

(24)

SLS:	*Ne dedin orada?*	*What were you saying there?*
Ergün:	"Hoezo" *dedim Bu demektir ki "nasıl birsey" veya "anlamadım." Ben bunu çok kullanıyorum. Yani karsımdakımı anlamasam* "hoezo" *derim, ve karsımdaki daha kolay laflardan anlatmaya çalısır*	*I said* "hoezo" "Hoezo" *here means "what kind of" or "I do not understand." I use it very often. That is, if I don't understand my interlocutor* I say* "hoezo" *Then my interlocutor will try to explain it in easier words.*

SLS:	*Yani anlamadıg'ında*,	*So you say* "hoezo" *if you
	"hoezo" *dersin o da daha	don't understand something for
	fazla açıklasin?*	him to offer extra explanations
Ergün:	*He*	*Yes*

Ergün's sequential development of *welk?* ("which") and *hoezo?* ("why") is confirmed by an analysis based on all 27 recorded activities during the data-collection period of three years (see Broeder & Roberts, 1988: 83). Whereas *welk?* ("which") is used from the beginning in the first sessions, *hoezo?* ("why") only appears for the first time in two years.

Conclusion Ergün: In the first session, Ergün appears satisfied with global understanding. Instances of non-understanding are not negotiated at length. NU-indicators include: minimal queries, reprises, and formulaic comments. In the second session, Ergün begins to aim at more detailed understanding of the TLS. Minimal NU-indicators are used less often, metalinguistic NU-indicators lose their formulaic features, and reprises are used in an elaborate way. The interactional behavior of Ergün, that is coping with NU-problems by most commonly signaling his difficulty, implies that he is more at risk in terms of face-saving. In the second and third sessions, Ergün seems to compensate for this by explicit statements like *Yes I know*, but also by modifying his repertoire of NU-indicators towards more effective and less face-threatening devices.

CONCLUSION

On the basis of the analysis of the housing office roleplays, a number of similarities and differences emerge among the four subjects and their native interlocutors. We return now to the research questions that were formulated in the beginning of this paper. These questions focus upon: (I) the repertoire of NU-indicators/symptoms; (II) the interactional procedures used to achieve understanding; and (III) the interactional procedures used to acquire a second language.

I How are problems of understanding marked in interethnic communications between a non-native speaker and a native speaker of the target language?

The four adult second language learners of Dutch differ in the degree to which NU-markers could be found in their interaction. This is affected by their target language proficiency and also by their willingness to go "on record" and their "face policy."

The Moroccan learners of Dutch: Fatima has a very limited repertoire of NU-indicators and almost exclusively relies on lack-of-uptake and minimal feedback, which are interpreted as NU-symptoms by the TLS. Her responses often seem to ignore the TLS's input. The overriding helps to surface understanding difficulties but there is no evidence that Fatima can use these opportunities to develop her capacity to understand. She has little choice and is probably not yet capable of producing explicit NU-indicators or reproducing parts of the TLS's utterance. Mohamed seems to favor off-record behavior. Rather than negotiating his understanding problems explicitly, he opts for minimal queries and lack-of-uptake as NU-indicators.

For the two Arabic adults a diffuse developmental pattern emerges. There is no clear decrease in the use of NU-markers.

The Turkish learners of Dutch: Ergün and Mahmut are both collaborative communicators. Especially in the interactions of Ergün, explicit NU-indicators (i.e., reprises and minimal queries) and NU-symptoms occur relatively more often.

For the two Turkish adults a decrease of NU-markers can be noted over time. In later sessions, Mahmut tends to keep on talking, as a result of which fewer NU-markers can be traced. In Ergün's case, we see a learner who uses a variety of NU-indicators in all sessions. The development of a face-policy suggests a modification of his repertoire of NU-indicators. In later stages metalinguistic comments are less formulaic and *welk?* ('which') is replaced by the more powerful *hoezo?* ('why').

II What are the interactional procedures used by the interlocutors to achieve a joint resolution of understanding problems?

The informants' strategic use of NU-indicators, their indirect means of suggesting non-understanding and their later combining of direct and indirect means points to an increasing level of understanding. In other words, those informants who vary strategies according to the context usually manage to resolve NU's successfully and maintain a good interactional climate.

The wait-and-see strategy: Fatima and Mohamed rely on the wait-and-see strategy. Fatima very rarely uses NU-indicators and her minimal level of participation throughout suggests that she does not have the means to use her very limited target language resources in a strategic way. She is probably not yet capable of producing explicit NU-indicators or reproducing parts of the TLS's utterances. The result is often that the interaction is an unpleasant experience for Fatima. Mohamed's use of the wait-and-see strategy seems to be more effective. He makes strategic use of it because he has explicit NU-indicators at hand at the right moments. In particular, he uses reprises of the interlocutor's words. Ergün and Mahmut do not "wait-and-see." Mahmut is cooperative. He talks all the time, but he does take in the contributions of his interlocutor. The most distinct strategist in handling non-understanding is Ergün. He uses more explicit NU-indicators in combination with a well-chosen face-policy.

Reprises and the keyword strategy: Except for Fatima, the informants tend to use reprises to indicate a general problem of non-understanding. They either use the keyword strategy or they simply repeat the final item in the TLS's utterance. This usually causes some confusion as the TLS may respond as if the learner confirms the understanding/acceptance of the reprised part of the utterance.

Reprises and response-preparing: In later stages, reprises are more direct, well-considered NU-indicators. The reprises tend to be more integrated into the learners' utterances and to be used to achieve an understanding of detail. Ergün's specific re-use of the trouble source is striking. It seems as if during the first stage Ergün wants to reconstruct the preceding utterance by means of re-using

parts of the TLS's utterance. There is almost no understanding. By re-using (repeating/reformulating) the preceding TLS's utterance bit by bit he tries to get at least some understanding of it. In later stages even more functions can be assigned to this re-using procedure. He seems to want to improve or to check his (partial) understanding. So the relevant TLS's utterance is already understood to some extent. Ergün uses this reconstruction procedure as a response-preparing device. It provides him with a stronger guarantee that his next response will be appropriate. For Mohamed we also find response-preparing as part of face-saving behavior. He uses reprises of the interlocutor's words but also minimal queries as NU-indicators.

III What are the interactional procedures that facilitate (or inhibit) second language acquisition?

The analysis presented in this study is based on only 24 interactional settings of four subjects with two native speakers of Dutch. In the ESF project similar studies were done by Broeder & Roberts (1988) (see Bremer et al., 1993: 169-184 for a summary). They applied the analytical distinctions of NU-markers for all of the source to target language pairs in the ESF project.

The case studies in the present study illustrate a number of general assumptions about the relation between learner behavior and the success in understanding the target language during acquisition processes. Interactional strategies of learners which seem to promote the development of understanding include the following (cf. Broeder & Roberts, 1988).

In all stages the learner should try:
- to participate actively in the joint exchange of meaning, not to rely on the wait-and-see strategy by only using solely minimal responses (e.g., minimal feedback/queries).
- to make use of discourse sequence changes where the interactional context allows: e.g., *let's have a look*, *to summarize* . . . .

In early stages the learner should try:
- to signal understanding difficulties clearly by using explicit NU-indicators such as metalinguistic comments,
- to use the keyword strategy to highlight essential or understood items.

In later stages the learner should try:
- to maintain the balance between problem-solving and progress of the interaction,
- to make a strategic and context-sensitive use of reprises and markers of NU: e.g., opt for minimal feedback to progress a difficult interaction and then go "on record" with a metalinguistic comment,
- to combine negotiation of meaning with showing awareness of face issues; e.g., Ergün uses a direct indicator *hoezo?* ("why") instead of the simple *welk?* ("which"), which rather than making him feel dependent, adds powers to his position,
- to integrate NU-indicators in the interactional context; e.g., use comprehension checks with indirect signals of understanding difficulties,
- to take the initiative in establishing topics of conversation in order to forestall potential understanding difficulties.

This study highlighted four adult language learners, specifically their developing capacity to understand in the process of acquiring the second language. By presenting these four case studies as four unique adult second language learners, the learner-specific findings (i.e., questions I and II) and the more general findings (i.e., question III) can be usefully applied both in language learning classrooms and in training and support for TLS who are routinely involved in interethnic communications. In other words, the case studies should be seen as four unique instantiations of the general theme "learning to understand in interaction."

Those learners who can manage the tension between negotiating understanding on the one hand, and achieving a smooth interaction on the other, are likely to be good learners. They show an awareness of how to interact successfully which, in turn, builds up their experience of interethnic communication positively affecting motivation. While maintaining a smooth interactional climate, they note more or less explicitly specific problems of understanding and

raise these as problems where strategically appropriate: "those who notice most learn most" (cf. Schmidt & Frota, 1986).

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NOTES

[1] *Transcriptions:* In the sequences capitals are only used to mark beginning of utterances. In addition, simplified, i.e. more readable versions of the transcription conventions in the ESF project are used:

'+'	indicates unfilled pause
'*'	non-target language words are put between asterisks: *word*
'""'	quoted speech is indicated by "quote"
'/'	indicates a speaker's self-interruption or self-repair
'\'	indicates the interruption of one speaker by another
'^'	indicates notable intonation rise
'_'	indicates notable intonation fall
'< >'	comments on the situation, the interlocutors, etc.
'<..>'	indicates that some parts of the sequence are not given
'[ ]'	simultaneous speech, one pair of brackets corresponds with another pair in the speech of another speaker

English transliteration: For clarification purposes the transliteration of Dutch is a combination of word-for-word transliteration and standard English. Dutch minimal feedback items are rendered as follows:

agreement;	*hm* = 'um', *hmhm* = 'uh-huh'
filler;	*uh* = 'er', *hm* = 'erm'
tag-like question;	*he?* = 'eh?', 'right?'

Non-target language words are translated and put between asterisks: *turkish word*. The orthographic representation of Moroccan Arabic is derived from Harrell (1962).

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Code-Switching as an Evaluative Device in Bilingual Discourse

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For bilingual speakers, code-switching can serve various discourse functions. In this paper, the evaluative component in bilingual discourse will be examined, in order to show that for the purpose of evaluation the bilingual often switches from one language to the other. This switch of code gives emphasis to the evaluative comment and, due to the in-group nature of code-switching behavior, adds to the overall interspeaker involvement. While the notion of the evaluative component has been developed in the framework of the narrative template, it will be shown that in unplanned natural bilingual conversation the evaluative component can also be distinguished and this evaluative component often tends to be accompanied by a switch of code. I will look at spontaneous stories, unplanned short narratives, and conversational exchanges as they have occurred in the recorded speech of two Finnish-English bilingual children. About 42% of all evaluative comments in the data were code-switched, and out of all code-switches 23% were evaluative in nature. The question of the metaphorical significance of the direction of switching will also be addressed.

INTRODUCTION

A considerable amount of research has proliferated around the notion of code-switching, "the use of more than one language in the course of a single communicative episode" (Heller, 1988). The literature on code-switching can roughly be divided into two broad categories: studies on code-switching as a sociolinguistic phenomenon on the one hand, and studies which investigate code-switching from the viewpoint of formal syntax. The studies belonging to the first category contribute to answering the classic question, formulated by Fishman as "*who* speaks *what* language to *whom* and *when*" (1972). This line of inquiry has produced an enormous body of knowledge on the sociolinguistics of code-

switching (e.g., Blom & Gumperz, 1972; Ferguson, 1959; Gumperz, 1976; Haugen, 1973; Scotton & Ury, 1977).

The second category, a somewhat more recent approach to the phenomenon, attempts to determine the syntactic constraints to which code-switching is subject (e.g., Clyne, 1987; Di Sciullo, Muysken, & Singh, 1986; Joshi, 1985; Pfaff, 1979; Poplack, 1980; Stenson, 1990; Woolford, 1983).

Both research approaches, the more pragmatic and the more syntactic one, have attempted to *explain* code-switching by answering the questions of why it happens and what constraints, either discourse or syntactic, regulate its occurrence in bilingual competence. Although code-switching is probably never entirely predictable, it can often be explained[1] in terms of such *external* factors as changes in the topic of discourse, interlocutors, setting, or activity (Gumperz, 1982; Hatch, 1976).

While code-switching can be explained in terms of the above mentioned external factors, such factors cannot account for all switches, and sometimes the explanation for a switch lies in *internal* factors having to do with "various emotive devices" (Hatch, 1976). These discourse functions of code-switching are many. Code-switching can be employed for emphasis, contrast, parenthetical remarks, affection, or humor (Hatch, 1976). Code-switching is a strategy which is often employed "for more effective communication" and "better story-telling" (Hatch, 1976). Olshtain and Blum-Kulka have pointed out the function of code-switching as a dramatizer in narratives (1989); also Gal (1979) and Timm (1975) note its use as a stylistic or rhetorical device.

The purpose of the present paper is to explore one specific rhetorical function that code-switching can have: evaluation. As noted by Hatch, code-switching "may relate to an 'evaluation' function in discourse--that is, changing from one language to the other serves to involve the listener in the interaction or lends dramatic effect to the story line" (1992). Gal (1979) also notes the "validating" function of code-switching in Hungarian-German data. Explicit evidence for the evaluative function of code-switching has been given by Alvarez (1989) in her study of the distribution of code-switching in narratives by the bilingual members of a Puerto Rican speech community in New York. In her study Alvarez reports on a relationship between code-switching and evaluation in oral narratives.

Tannen (1989) believes that evaluation as an involvement strategy applies not only to narratives, but to nonnarrative discourse as well. However, since naturally occurring spontaneous conversations differ in many respects from elicited narratives, folk tales and other more or less organized and planned forms of story-telling, I propose the following questions: Can evaluation–an integral part of the narrative genre–be identified in the genre of spontaneous bilingual conversation and, if so, can any patterns be detected in terms of its relation to code-switching, a built-in feature in bilingual in-group conversation?

Within the framework of discourse analysis, recorded spontaneous conversations by two Finnish-English bilingual children were examined. It was found that not only was the evaluative component clearly identifiable but also it was often realized as a switch of code. What turned out to be a teasing issue was the question of the directionality of the switch.

The contribution of the present study to the understanding of bilingual discourse is to establish a relationship between evaluation and code-switching in spontaneous bilingual conversation, a genre within which the evaluative function of code-switching has not yet been extensively examined. In addition, by addressing the controversial question of whether the Gumperzian (Gumperz 1982) analysis of minority and majority codes as the low-prestige "we-code" and high-prestige "they-code" respectively could–or indeed should–be applied to the interpretation of bilingual discourse, the study invites and lays a basis for deeper inquiry into the area of bilinguals' use of their minority and majority codes.

The evaluative component of narrative template

In their seminal study of the narrative structure, Labov and Waletzky (1967) define evaluation as that part in a narrative where narrators express their attitudes towards the narrative's contents. Often the evaluation sections can be formally defined according to their location between complicating action and the resolution; however, evaluation can occur throughout the narrative, it can be repeated in the coda as a moral (Hatch, 1992), or merged with the result (Labov & Waletzky, 1967). Since the sequential placement of the evaluative section within the narrative is not completely predictable, Labov and Waletzky emphasize the importance of semantics in the definition of evaluation.

In the narrative, the function of the evaluative component is to highlight the point of the story, its importance, and its meaning (Labov, 1972). Getting the audience involved is a sign of a good storyteller, and skillfully employed evaluation helps the storyteller to reach this goal (Hatch, 1992).

Evaluative devices can be non-verbal or verbal. For instance, gestures, intonation, and laughter can be used as evaluative devices to involve the listener. Verbal means may include intensifying expressions, repetition, direct quotes, and rhetorical questions (Hatch, 1992; Labov & Waletzky, 1967).

Evaluative comments may have certain identifiable grammatical characteristics. The shift in the use of tense is often typical when the monolingual narrator moves from the general story-line to evaluation (e.g., Hatch, 1983). This tense-shift is a device which helps to emphasize the content of the evaluative component, and it thus helps in highlighting the point of the story. For bilingual speakers, not only tense-shift but also a total shift of code is available as an emphatic device to involve the bilingual listener.[2]

For bilingual speakers, code-switching is a powerful means to carry out evaluation in narratives. It can be combined with tense-shift to give an added emphasis to the evaluative component. Code-switching in itself is often an in-group signal of bonding behavior, and its availability as an evaluative device adds to the cumulative effect it has in interspeaker involvement, which is probably the ultimate goal of the evaluative component in the narrative template.

METHOD

Clearly, the notion of evaluation can be understood in an extremely broad sense, from gestures and laughter to explicit value judgments about the content of the narrative. In this paper, the assignment of the comments to the category "evaluation" represents the present writer's interpretation. The notion of evaluation has been understood as restricted only to those clauses where the attitude of the speaker towards the topic at hand has been explicitly expressed in an utterance which summarizes or concludes the topic discussed, with a more or less explicit value judgment[3], as for

example the English comment "She's stupid!" (25)[4] after a conversation in Finnish about a friend's negatively valued behavior. For the quantitative analysis of evaluations, co-constructed evaluations–when one of the subjects gives an evaluation of the topic at hand and the other subject immediately agrees (or gives her version of evaluation)–have been counted as one co-constructed evaluative comment.

The definition of code-switching in this study includes all turn-internal switches (both intrasentential and intersentential), plus switches between turns. Defining what is a switch between turns in multi-party, multi-lingual conversation is not always an easy task; the following criteria have been consistently followed here. 1) The turn starts with a code-switch, if the language of the starting turn matches *neither* with the language of the previous speaker *nor* with the language which the beginning speaker used last, if she has spoken within the past ten turns. 2) The turn is not code-switched, if the language matches the language of the previous speaker, *or* the language which the current speaker used last. (These two criteria for defining an inter-turn code-switch were necessary in order not to count as code-switches such instances where one speaker consistently across turns uses only one language, while the other interlocutors may use another language. For example, long conversations were carried out with the mother speaking Finnish and the subjects speaking English, and even though English thus interspersed with Finnish, each new English turn spoken by the subjects was not counted as code-switched.) 3) If the speaker has not spoken for ten turns and starts with a language different from that used by the previous speaker, this has been counted as a switch. (Ten turns were chosen arbitrarily, the rationale being that if a person has not spoken for many turns and starts by using a different language than one used by the previous interlocutor, this should be regarded as an instance of re-establishing the use of a different language, i.e. a code-switch.) 4) If the previous speaker's turn included the use of the two languages, the matrix language of the last sentence is compared with the language of the following turn. 5) The initial turns of the speakers in the beginning of each recording session were never counted as code-switches, even though the language did not necessarily match the language of the previous speaker.

When the relationship between evaluation and code-switching is examined, a host of other factors need to be taken into

account as well. Code-switching is a multi-functional feature in bilingual discourse: it may have occurred because of the change of interlocutor, topic-shift, or some other change in the speech situation. It could signal distancing behavior ("I'm not with you; I'm even speaking a different language"), it could be dictated by quicker access to certain concepts in one or the other language, or it could simply be due to the current preference or whim of the individual speaker. When a code-switched utterance in this study has been interpreted as evaluative, the other possible explanations for the switch of code have by no means been ruled out; it is the strikingly frequent co-occurrence of evaluation and code-switching that is emphasized.

Subjects

The data come from naturally occurring conversation by two Finnish-English bilingual sisters who, at the point when the data collection started in November 1990, had resided in the United States for one year and five months. The ages of the two sisters at that point were 9;2 for Subject 1, and 8;1 for Subject 2. The subjects had arrived in California at the age of 7;9 and 6;8, respectively. During their 17-month residence in California, both had become fully fluent in English. The English proficiency tests at school in September 1990 indicated that neither of the subjects was in need of ESL instruction. While the use of English had started to be preferred especially by S2, the younger subject (Halmari, in press), both girls were still able to carry out lengthy monolingual conversations in both languages, according to the needs of the situation (e.g., in Finnish with monolingual Finnish relatives and visitors).

Data

The data were recorded between November, 1990 and March, 1991 in two different situations: when the girls were playing together in their room, and during breakfast or snack time with other members (usually the mother) of the family. The recordings consisted of eight and a half hours of spontaneous conversation. The data were transcribed and, according to the above described criteria, all evaluative comments in the two siblings' speech were counted, as well as all their code-switches.

Table 1 shows the total number of code-switches (from switches of single words and phrases to switches of turn- and sentence-length), and the distribution of evaluative switches in contrast with all other switches.

Table 1. **Distribution of evaluation across all code-switches**

	n	%
Code-switching with evaluation	156	(22.6)
All other code-switches	533	(77.4)
Total number of code-switches	689	(100)

Out of the 689 code-switched segments, the total of 156 (almost one fourth) could clearly be identified as evaluative in nature. Example (1) is an illustration of a typical evaluative switch.

(1) Joo. Siellä oli ensiks- joo ja tota (LAUGHTER)
     'Yeah. There was first- yeah and well'
     sen weather uutisissa (LAUGHS) siellä näytettiin
     'in its weather forecast (LAUGHS) they showed'
     aina mitä tuli! (LAUGHTER)
     'always what came!' (LAUGHTER)
→ It was real funny. (49)

Table 2 shows the distribution of code-switched and non-code-switched evaluative comments.

Table 2. **Distribution of code-switching across all evaluations**

	n	%
Code-switched evaluations	156	(41.6)
Non-switched evaluations	219	(58.4)
Total number of evaluations	375	(100)

As Table 2 indicates, more than forty percent of all evaluative comments were code-switched. Table 3 shows the numbers of evaluative switches from Finnish to English (A), from English to Finnish (B), and the numbers of evaluative comments without switching, both within English (C) and Finnish (D) discourse.

Table 3. Evaluative comments, according to language

	n	%
A. From Finnish to English evaluation	129	(34.4)
B. From English to Finnish evaluation	27	(7.2)
C. Evaluation in English, no switching	157	(41.9)
D. Evaluation in Finnish, no switching	62	(16.5)
Total number of evaluations	375	(100)

Switches from Finnish-based discourse into English for the purpose of evaluation, as in example (1) above, constituted roughly a third of all evaluative switches. 7.2 percent of all evaluations were switches into Finnish from English-based discourse, as in example (2).

(2) S2: You have to wear long- long underwear.
     S1: Uh-huh.
     S2: And [stockings-
→ S1:   [Musta ne VILLAhousut on hirveitä.
          'I think those WOOLLEN underpants are awful.'
→ S2: Niin on!
      'So they are!' (LAUGHTER)   (97)

The general feature of the data that were recorded when the girls were playing in their room by themselves, was that they were speaking either predominantly Finnish, only with occasional switches to English, or predominantly English, depending on the topic of the talk or activity. When the dominant language was

Finnish, the topic of the recorded conversation in the girls' room was the children the subjects frequently played with, and the genre of the conversation is here characterized as "people talk." The choice of language for "people talk" (Finnish), could probably best be explained as an instance of bonding. The girls were talking about children they at that moment wanted to picture in a negative light, and the choice of Finnish might symbolize togetherness: we two are different from these "stupid kids," we even have a different language. This is an interesting phenomenon, since the more automatic language choice was English.[5] At this point in their bilingualism, S2, the younger subject, seemed to lean more towards speaking English, whereas speaking Finnish came somewhat more naturally to S1, the older subject.[6]

I want to emphasize the fact that the data consist of spontaneous, unplanned conversation and, as such, also contain a few exchanges where the mother explicitly asks the subject to tell her about something specific (e.g., example 5 below). While this may seem more like an instance of elicitation, I argue that these instances are a typical, unplanned part of natural conversation between a middle-class mother and her children, and even though the child's answer is elicited by the mother's question, the data themselves remain spontaneous.

DISCUSSION

Stories

While naturally occurring conversation may at first sight seem to be full of topics that are started but never completed, it was nevertheless possible to find one more or less complete conversational "episode" (Tannen, 1984), or "story" after another. According to Tannen, stories are typical of high-involvement style, a style also represented by the present data of in-group conversation between the two siblings and other members of the family.

In the data presented here, stories stood out clearly from the surrounding speech, which could often be characterized by either phatic communion ("bye" (34) to an older brother leaving for school), strictly functional discourse ("Stop playing with that chinese jumprope or I'll get mad!" (26)), or short conversations

made out of question-answer adjacency pairs, as in example (3).

(3) S2: Remember to see me at the recess then.
    S1: Uh-huh. Which recess?
    S2: Lunch recess.   (36)

The stories are fluently embedded in the surrounding discourse. They are often triggered by the current discourse topic, which happens to remind one of the interlocutors about an incident she wants to share. Bridges from one topic to another seem to develop easily. Only in a few cases does the mother initiate a topic by asking the subjects to tell her something, for instance about school.

The first research question–whether evaluative comments can be found at all–was quickly answered. Whenever stories occurred, evaluative comments could often be found as well. The speech situation itself also triggered evaluation (Example 11, below). The second question–whether code-switching seems to go together with the evaluative component–also received an affirmative answer: code-switching often occurred in the evaluative comments (about 42 percent of all evaluations were code-switched), and about 23 percent of all code-switches were evaluative in nature (Tables 1 and 2 above).

Code-switching for the purpose of evaluation

As pointed out above, possible reasons for code-switching can be numerous. In these Finnish-English data, the two subjects code-switch for various reasons: discourse topic (e.g., talk about the Finnish grandmother triggers a switch to Finnish, but school-related topics are discussed in English), lexical gaps in one of the two languages, an attempt to distance oneself (e.g., during arguments; cf. Gal, 1979), a need to directly quote someone (cf. McClure & McClure, 1988), or a change of interlocutor (e.g., the father is always addressed in Finnish). Stories may begin and be told in one language, but a switch to the other language tends to occur at the coda in the form of an evaluative comment. In example (4) below, S2 is telling a story about a neighbor's girl, who had "spat on the steps"–an act that received severe criticism by the two subjects.

(4)   1 S2: Ja tiäksää kusse tuli-
            'And you know when she came'
      2   niin mää näin sen että että se niin tota
            'so I saw her   that that she well like'
      3   sylkäs meijän rappusille.
            'spat on our steps.'
      4 S1: SYLKÄS!
            'SPAT!'
(22 LINES OF DETAILED DESCRIPTION IN FINNISH)
      5 S2: se tulee täältä näin ja
            'she comes from here like this and'
(S2 PRETENDS TO SPIT)

→   6 S1: <u>Uh!</u>
      7 S2: Si- eli siihen misson niinku- tässon kukat
            'Ther- so there where there's like- here's the flowers'
      8   ja sitten siihen siihen mistä
            'and then there there where'
      9   missä kävellään ylös rappusille.
            'where we walk   up the steps.'

→   10 S1: <u>She's stupid!</u>
                      L
→   11 S2:   <u>I know.</u>   (24-25)

The dominating language here is Finnish, a fact that also needs to be taken into account. As I have pointed out above, the reason for the choice of Finnish here might be the fact that the subjects, being engaged in "people talk" about an English-speaking playmate, find Finnish as a symbol of bonding–a true instance of Gumperzian "we-code"(1982). The story describes an event which is evaluated on lines 10-11 by both subjects, and this evaluation is marked with a switch to English. It is interesting that while the dominating language of the story has been Finnish, both subjects switch to English when they evaluate the protagonist's behavior. Also the verbalization "uh!" on line 6, where S1 expresses her disapproval of the spitting, is typical of English discourse, not Finnish.[7]

   As has been noted above, the fact that code-switching here takes place for evaluation does not mean that it is a predictable feature of evaluative comments in bilingual discourse. During the story, some evaluative comments are also given in Finnish (e.g.,

Hyi! 'Phew!' and Ei sitä oikeesti sais tehdä täällä 'One shouldn't
really do it here'). It is interesting, however, that at the end of the
story a switch does take place. This finding is parallel to what
Alvarez (1989) found in a bilingual Puerto Rican community; in
their Spanish stories, Spanish-English bilinguals tended to switch
to English at the very end.

In the following conversation the mother (M) asks S1 to tell
her something that had happened in school. A "wedding" had
taken place during lunch recess; a boy had married several girls
simultaneously in a ceremony with a "priest" and "invited guests."
S1 had been one of the "brides."

(5) 1 M: A:i. No mitäs tapahtu sitten?
          'O:h. Well what happened then?'
    2 S1: Well. Siinä kylläkin sitten Brian
          'There actually Brian then'
    3   se oli se joka kanto ne- sormukset
          'he was the one who carried the- rings'
    4   mm. Mun sormus kerran putos ja sittem me etittiin
          'mm. My ring fell once and then we looked for'
    5   ja mää /tota/ onneks löysin seh. Huh! ..
          'and I /well/ luckily found it. Hh! ..'
(THE CONVERSATION GOES ON IN FINNISH FOR 9
  TURNS)
    6 S1: Sitten pihalla oli hirvee möly
          'Then there was an awful noise on the yard.'
    7   ja kaikki o-
          'and everyone wa-'
→   8   and everyone was unhappy about it. (31-32)

During this Finnish conversation the only actual switch to English
takes place for the purpose of evaluating the "wedding" in the coda;
the "wedding" was not a success because it was too noisy, and
"everyone was unhappy about" the whole thing (lines 7-8).

The above story about the "wedding" was told exclusively
by S1, the interlocutor's role being only that of asking questions
and backchanneling. Often in spontaneous conversations stories
are told as a collective activity where all participants contribute to
the outcome. In the following example (6), the two daughters

along with their mother recollect how some old folks in Finland drink coffee.

(6) 1 S2: Mää oon nähny aikuisten Suomessa että että
      'I have seen adults in Finland that that'

  2   jos niiltä menee sitte kupista alas   [niin
      'if they spill then from the cup so'

  3 M: [Niin?
                                  'Yes?'

  4 S2: niin ne ottaa seh ja sit niitte
      'then they take it and then from their'

  5   (INHA[LES)   lautasesta!
                  'from the plate!'

  6 S1:   [(LAUGHS)

  7 S2   (LAUGHS)

  8 S1   Mites ne hampaattomat naiset jua juakaan sitä
      kahvia?
      'How do those toothless women drink drink
        that coffee?'

  9 S2   Nehän /?/
      'They, you know /?/'

 10 S1   /?/ siä niitten talossa ne teki-
      '/?/ there in their house they did-'
                        L

 11 M: Ja ne pistää
                          'And they put'

 12   sokeripalan tähän suu- huulien väliij ja-
      'a piece of sugar here mouth- between the lips and-'

 13   kaataa kahvia asetille ja, ryystää näin (INHALES)
      'pour coffee on the plate and, drink like this'

 14 S1&S2 (LAUGH)

 15 M: Sen sokeripalan läpi kun se menee-
      'When it goes through the sugar it goes-'

 16   se kahvi siinä.
      'the coffee there.'
                      L

 17 S1:   Mhm.Mhm.

→ 18 S2: Heh-heh. /?/ <u>Funny</u>.   (35)

It is noteworthy that here S2 does not switch to English before she introduces the evaluative comment (line 18), despite her strong preference for frequently switching to English elsewhere. All her turns before the final evaluation on line 18 are in Finnish (lines 1-2, 4-5, 9). A story is somehow identified as a complete whole, during which code-switching is preserved for evaluative (and possibly other emphasizing or dramatizing) purposes.

In example (7) below the subjects are planning their mutual participation in a "collection show" at school. All the planning happens in Finnish (except for the single noun stage on line 3, and a direct quote on line 6).[8] For the outcome of the planning-- consisting of an evaluation of how S2 would feel if she had to go to the stage instead of S1 (line 9)--the code is switched from Finnish to English.

(7)   1   S2:   Mää en käsitä-
                'I don't understand-'
      2   S1:   No näät sitte.
                'Well you'll see then.'
   (7 TURNS IN FINNISH)
      3   S1:   Ethän sää sinne stageille tuu?
                'You won't come to the stage, right?'
      4   S2:   En!
                'No!'
      5   S1:   Joo. Mää vaan sanon että mm
                'Yeah. I'll only say that mm'
      6   "my sister is in this collection too." ...
      7   M: Joo. Hyvä ...
                'Yeah. Good.'
      8   Ekkö sää haluis Irene mennä?
                'Wouldn't you like to go Irene?'
   → 9   S2:   No: .. I'd be embarrassed.   (37)

In example (8), M asks a question in Finnish (line 1), the answers are provided in Finnish (lines 2-5), and S1 tells a story about meeting the person in question in Finnish (7-14), but a switch to English takes place when S2 provides the evaluative comment on line 16.

(8) 1 M: Muistatteks te sitä- Tyrväisen tätiä?
             'Do you remember her- Aunt Tyrväinen?'
     2 S2: Joo.
             'Yeah.'
     3 S1: Ker- [kyllä mä oon kerran nähny.
             'once- yeah I have once seen (her).'
     4 S2:   [Joo, mää muistan.
                     'yeah, I remember.'
     5   Kerran nähny.
             '(I have) once seen (her).'
     6 M: Joo. Se on ihan kiva täti.
             'Yeah. She is quite a nice aunt.'
     7 S1: Tota, kerran se tuli Jukalle ja Ailalle,
             'Well, once she came to Jukka's and Aila's (house)'
     8   ja tota- tota- no sitte kusse lähti,
             'and well- well- like when she left,'
     9   mää menin tota, mää kysyin Ailalta
             'I went like, I asked Aila'
    10   että kekä SE oli.
             'that who SHE was.'
    11   Ja tota Aila sano etta mun äiti.
             'And well Aila said that my mother.'
    12   Ja tota,
             'And well,'
                         L
    13   Nih?
                       'Yes?'
    14   Sittem me oltiin ihan että, OLIKO?
             'Then we were all like, WAS (SHE)?'
    15 M: Mhm. (LAUGHTER)
→   16 S2: <u>She doesn't look like Aila's mom.</u> (98)

An evaluative conclusion can trigger a switch in the code used, as in (9).

(9) 1 S2: Äiti .. Iita luulee /että jos/ Jaakko tekee
              'Mom .. Iita thinks /that if/ Jaakko does'
      2   sille Iitalle näin niin Iita luulee että
               'to Iita like this so Iita thinks that'
      3   että siitä tulee tällaseks.   [Kaulattomaks.
               'that she becomes like this.   Neckless.'
      4 M: [Jaa.
                                                   'Oh.'
                                                          L
      5 S1   Tulee.
                                                   'Yes, it happens.'
      6   Yks tut- .. Avec sano sen isoveli oli kertonu
               'One frien- .. Avec said his big brother had told'
      7   sille että että että jos et näin tekee toiselle-
               'him that that that if you do this to someone-'
      8 M: Nih?
               'Yes?'
      9 S1:   niin siittä tulee semmonen
               'so one becomes such'
     10 M: Toisesta tulee kaulaton?
               'The person becomes neckless?'
     11 S1:   Joo.
               'Yeah.'
     12 M: [(LAUGHS)
     13 S1:   [/?/ sen isoveli on yheksäntoista
               '/?/ his big brother is nineteen'
  → 14 S2: But I don't believe that.
  → 15 S1: I do.   (105)

In addition, the language of the initial evaluation can
sometimes match the language of the preceding discourse;
however, the final, concluding evaluation tends to be code-
switched. In (10), both remarks by S2 evaluate the same event–
something surprisingly nice done by the big brother, but the latter
example is code-switched.

(10)   S2: Oli mukavaa Jaakko. ..
              'That was nice Jaakko. ..'
  →   I don't believe you did it.   (119)

A code-switched exclamation can also serve as an evaluation. In the following example (11), S2 sees the situation of mother being afraid of a little worm as funny.

(11)   S2: Täällon mato menes- menemässä tossa. Mato!
               'There's a worm going- going there. A worm!'
         M: Mitä!?
             'What!?'
         S2: Pieni [mato (LAUGHTER)
             'A little worm'
         M: [Hyi kauheeta!
                    'Phew yucko!'
    → S2: (LAUGHS) <u>Oh my gosh!</u>   (135)

The following short examples show the clear tendency of the evaluative component to occur in a language different from the dominating language of the preceding conversation. In all these cases the switch happens to be to English. The evaluations may state an opinion about a current discourse topic: something or someone is <u>boring</u> as in (12), <u>funny</u> as in (13), or <u>weird</u> as in (14).

(12)   M: Onks Andrew vielä .. yhtä mukava kun ennen?
              'Is Andrew still .. as nice as before?'
         S1: Kun kekä?
              'Like who?'
         M: Yhtä mukava kun ennen?
              'As nice as before?'
    →   S1: No- .. <u>He has started being BORING</u>.
              'Well-'   (163)

(13)   S1: tottakai .. <u>well it looks so funny!</u>
              'of course'   (113)

(14)   S1: Sää haluut panna sen pyykkiin heti.
              'You want to wash it right away.'
    →   <u>It's so weird.</u>   (112)

The following code-switched evaluation by S1 concludes the preceding narrative told by S2.

(15)   S2: Sitten me mentiin toiseen juttuun.
              'Then we changed the subject.'
        S1: <u>Oh</u>, mihinkä juttuun?
              'to which subject?'
        S2: Emmää muista.
              'I don't remember.'
→   S1: <u>Oh, well who cares about THAT</u>.   (23)

In general, the structure of the code-switched evaluation often tends to consist of a copula, and an NP containing an adjective or an adjectival phrase (16-17).

(16)   M: Eiks o mukava mennä taas Loma Lindaan?
              'Isn't is nice to go again to Loma Linda?'
→   S1: Joo. <u>That's my favorite school I've ever been to</u>.
              'Yeah.'   (111)

(17)   M: Irene, otaksää tätä kakkua?
              'Irene, do you want this cake?'
        S2: Emmää tykkää <u>cheese cake</u>stä.
              'I don't like cheese cake.'
        M: Ota sitten tosta toi- eilinen leivos.
              'Take then that- yesterday's pie.'
→   S2: <u>Yes. It's better</u>.   (80)

The verbs of the code-switched evaluations are often verbs of emotion: <u>I like</u> (18) or <u>I love</u> (19).

(18)   S1: Joo. <u>I like this picture</u>.
              'Yeah.'   (101)

(19)   S1: Ai se mun harmaa? <u>I loved her</u>.
              'Oh the grey [kitten] of mine?'   (109)

All of the above examples clearly show the robustness of code-switching as evaluation in discourse. I will next discuss whether these data should or should not be interpreted as supportive of the view of high- versuys low-prestige metahpor for English and Finnish respectively.

Direction of switching: A metaphor?

With the exception of example (2), all of the above evaluative codeswitches have been from Finnish to English. As shown in Table (4) below, more than 80 percent of all evaluative switches were switches away from Finnish to English, while only about 17 percent of the evaluative switches were in the direction of Finnish.

Table 4.   Switches into English versus Finnish for Evaluation

	n	%
Finnish discourse into English evaluation	129	(82.7)
English discourse to Finnish evaluation	27	(17.3)
	156	(100)

In discourse literature, associations of authority and power tend to be associated with the high-prestige code (see e.g., Blom & Gumperz, 1972, for bilingualism in Norway; Gal, 1979, for German versus Hungarian in bilingual Austria). Gal (1988), however, emphasizes that the majority code is by no means always the "symbol of power and prestige" (pp. 246-247). Auer (1984) has explicitly argued against the Gumperzian view of code-switching where switches to or from a language are seen as metaphors of what those languages represent to the bilingual speaker. According to Auer, "there is no logical necessity to attach semantic values (meaning potentials) to the two languages" (Auer, 1984: 91). If this view is adopted, the switch itself should be important and should alone fulfill the rhetorical function of evaluation, no matter the direction of the switch.

How do these interpretations translate to our examples of English evaluative comments within Finnish discourse by the subjects? Is English (the majority code) for them a "metaphor" of prestige more suitable than Finnish to sum up a conversation, to underline the point, and to emphasize one's opinion on the matters? The above examples of code-switching would seem to support the

high- versus low-prestige metaphor for English and Finnish
respectively. If the children 83 percent of the time resort to English
when they switch codes for the purpose of evaluation, they must
somehow attach English with more authority and prestige.
However, this interpretation does not hold to all the cases. In 17
percent of the evaluative switches Finnish is the language of
evaluation, as illustrated in example (20). S1 is trying to remember
an English song. She sings it in English, but switches into Finnish
to evaluate her performance.

(20)　　S2: Iiris, sing Puff the Magic Dragon in the first verse.
　　　　 S1: (SINGS:) Puff the Magic Dragon lived by the sea
　　　　　　　and frolicked through the autumn mist
　　　　　　　to a place called /?/
　　　　 S2: Hey mom, sing it again so mom can hear it.
　　　　 M: /?/

→　　　 S1: <u>Mää en oikeen osaa sitä vielä.</u>
　　　　　　 'I don't quite know it yet.'
　　　　 S2: Well do it!
　　　　 S1: Okay.　　　　　　　　　　　　　　　(44)

　　　　In (21) S2 is telling about kindergartners and firstgraders in
her school and the reasons why their participation in the "collection
show" (see example 7 above) should be restricted. In an example
of evaluation she states in Finnish that they are "somewhat younger
and stuff," whereas the beginning of the sentence and also the
repeated and right-dislocated subject NP are in English.

(21)　　Now first the kindergartners and the firstgraders /?/
　　　　'cause ..

→　　　*ne on sellasia .. nuorempia vähän ja sellasta ..*
　　　　'they are such .. somewhat younger and stuff ..'
　　　　firstgraders and kindergartners
　　　　MOSTly kindergartners.　　　　　　　(53)

　　　　In (22) S2 re-tells a somewhat questionable joke which she
had told to her friend about a Finn's adventures in the sauna. The
point of re-telling the story is the fact that her friend liked it, to the
point that "she could never stop laughing." While this is a
statement of fact, it at the same time functions as an evaluative

device: the joke S2 just re-told should be considered a great one, because the previous listener liked it.

> (22) S2: and .. it's a little hot place
> and you go there and first you have to go
> to the shower and then to the sauna and then go back
> and wash yourself. Well. (...)
> er- there was Finnish guy,
> Norway guy and an English guy.
> (...)
> there's these holes /?/ that you sit on,
> on the top and,
> his balls got stick in there!

> → *Se ei se ei ikinä pystyny lopettaan naura/mista/!*
> 'She could she could never stop laughing!' (137)

The following exchanges are discussions about the school lunch menu. They are carried out in English; however, to give an evaluation of the taste of hot dogs in example (23), S2 code-switches to Finnish. In (24) the children's reaction to beans is discussed in English but a code-switch to Finnish takes place when an evaluative description of the beans is given. Example (25) is a Finnish comment on what chocolate pudding looks like.

> (23) S1: Chili .. dog .. on a bun
> S2: Phew but I'll still   [take it
> S1:   [I mean-
> [chili chili /cheese dog/
> S2: [It's only a hot dog
> It's only a hot dog

> → *mutta se maistuu rasvasemmalta kun oikee hoddari.*
> 'but it tastes greasier than a real hotdog.' (142)

> (24) S2: everyone always [says
> S1:   ["no beans no beans no beans."
> S2: Some beans a-

> → well *ne on sellasia jotka /?/ tällasia uh!*
> 'they are such that /?/ like this yuck!' (143)

(25)   S2: (English)

→   *niin se on se näyttää kakalle.*
       'so it is it looks like poo.' (165)

From the above examples (20-25) it becomes clear that it is not exclusively English that can convey the rhetorical function of evaluation. Even though switches to Finnish are considerably rarer, they serve exactly the same evaluative function of conveying the speaker's attitude toward the topic discussed, or of pinpointing or emphasizing the contents of the message. Based on the quality of the evaluative switches (both Finnish-English, as well as English-Finnish) I would argue, along the lines implied by Auer (1984), that the direction of the switch does not matter and the use of English is not necessarily a metaphor of prestige and authority. However, the high frequency of English evaluative switches over Finnish ones renders this view somewhat questionable. Why would these subjects so much more often resort to English to give an evaluation if they felt that both languages were equal in authority?

       The answer to this question could be quite simple. The more stories and conversation we have in Finnish, the more switching to English for the purpose of evaluation there will be. In these data, all the "people talk" segments were predominantly in Finnish and the presence of the Finnish speaking mother and other family members in the breakfast table conversations clearly shaped the overall distribution of the language used to the favor of Finnish. In this case, the only direction left to switch into was English.

       Although the absolute number of evaluative switches to Finnish (27) is small if compared to the number of evaluative switches to English (129), in each language the percentages of code-switched evaluations indicate the following: while a considerable number of evaluations are code-switched (in Finnish 30 percent, in English 45 percent), more than half of all evaluations in both languages (70 percent in Finnish and 55 percent in English) remain un-switched (Table 5).

Table 5. Code-switched and non-switched evaluations in English and in Finnish.

| | Evaluative comments | | | | | |
| | In English | | In Finnish | | Total | |
	n	%	n	%	n	%
Code-switched	129	(45)	27	(30)	156	(42)
Without a switch	157	(55)	62	(70)	219	(58)
	286	(100)	89	(100)	375	(100)

Example (26) is one of the 219 evaluative comments where code-switching did not occur.

(26)   S2: You know lemme show you something
             this is what Miah once did on the recess time
             when we went to /five-four pencils/
             You- he he s- stuck the two of them in his nose
             and took that (MAKES A FUNNY NOISE)
             (LAUGHTER)
        S1: /Sick!/ Who did that?
        S2: Miah! (LAUGHTER)

→   Poor Matthew. He sits by him.

→   And Ashley has to sit by him too.

→   [Phew!

→   S1: [Phew!   (147-148)

In (26) no switch of code takes place in the evaluation. However, a switch of tense from the past to the present does take place. This shows that what is important in the evaluative comment for the achievement of the rhetorical effects of emphasis and hearer-involvement is crucially entailed in the switch; whether it be a tense-switch or a code-switch is not important for the outcome. For a bilingual, both means are available.

CONCLUSION

In this paper a description of the evaluation patterns in bilingual spontaneous conversation has been given in order to show that a favored strategy for concluding evaluations in bilingual discourse is code-switching from one language to another.

Because the discourse functions of code-switching are numerous, and because discourse factors themselves often dictate a change in code, it is often impossible to determine the real or primary reason for a switch of code. Other factors, for instance a need to speak in the same language as one of the interlocutors to whom the comment is addressed, rather than a need to evaluate effectively, might be the primary reason for code-switching. However, the numerous examples cited above give some indication that one of the functions of code-switching is indeed evaluation. Again, no predictions of the use of code-switching for this purpose can be made, but the need to evaluate the discourse content can clearly explain many instances of bilingual code-switching behavior.

Whether the switch itself or its direction to an assumed high-prestige code is important is a question open to debate. Even though the prevalence of switches to English in the present data could support the view of English as a metaphor of authority, I argue that since switches to Finnish also take place, and since switches to English are the only possibility if the prevailing language of conversation is Finnish, it is not the direction of switching which matters; the fact that a switch (of any kind) has taken place is the important feature of the evaluative component, not only in the genre of narrative but also in spontaneous discourse.

Since this paper is based on restricted data of two child bilinguals, it would be necessary to look at the co-occurrence of code-switching and evaluative comments, and especially the direction of evaluative switches in a larger bilingual population to determine whether code-switching really is an essential strategy for evaluation in bilingual discourse and whether an equal amount of switching to both directions will take place if the languages are better balanced than in the current data. This preliminary project, however, indicates that code-switching, indeed, is an important evaluative device.

ACKNOWLEDGMENTS

NOTES

[1] For examples of unpredictable but explainable switches, see Hatch, 1976, p. 202-203.

[2] I am indebted to E. Hatch (personal communication) for pointing out the parallel between tense-shift and code-switching as evaluative devices.

[3] For instance in these data laughter often clearly functions as an evaluative device. However, since laughter can serve other functions as well, it deserves to be separately accounted for and falls outside the area of the current paper.

[4] The numbers after the examples refer to the pages in the original transcript.

[5] In other instances when the girls were left alone with the tape-recorder while they were playing with dolls, they spoke predominantly English. Code-switching was used, however, and it revealed an interesting pattern recurring consistently in doll-play: when the girls were speaking "in character" (in the voices of the dolls), they used only English. However, they almost always switched to Finnish when they stepped out of character and started to plan the play (Halmari & Smith, 1992).

[6] Code-switching patterns may also reveal a starting/on-going language loss (Halmari, in press). This is also one factor that needs to be considered when analyzing the data to see patterns in evaluation. The preferred language for S2 was clearly English. The analysis of the favored code-switching patterns of the subjects indicated that 32 % of S2's all turn-internal switches (n=109) were language assignment shifts from Finnish to English (the turn or sentence was started in Finnish but a switch to English took place before the end of the turn). This might also influence her potential use of code-switching for evaluation. For S1, no such preference at that point of time could be detected: Finnish-English language assignment shifts constituted only 6 % of all her turn-internal switches (n=164) (Halmari, in press).

[7] These short verbalized back-channels have not been included in the count of switches.

[8] Code-switching for quotation to dramatize the narrative has been noted in the literature (e.g., Hatch, 1976; McClure & McClure, 1988; Olshtain & Blum-Kulka, 1989). Hatch (1992) classifies mimicking and direct quotes as evaluative devices. Since in my data all direct quotes consistently occur in the actual language in which the sentence was uttered, I will not look at quotes as part of evaluative

devices in this paper, even though their function often is to dramatize the story, and thus involve the interlocutor. The exchange in example (7) illustrates also an instance of a third type of switching: on line 3, S1 uses an English lexical item stage instead of the Finnish one. In the literature this type of switching is often called mixing or borrowing. Even though I consider these switches code-switching proper (Halmari, 1993), the discussion of their distribution is outside the focus of the present paper.

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EXCHANGE

In Defense of Connectionism

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Connectionism found its way into the pages of IAL in the last two issues, with Shirai (June, 1992) advocating a connectionist framework to explore a more integrative account of second language acquisition phenomena, and Fantuzzi (December, 1992) questioning the merits of the connectionist paradigm, criticizing in particular Shirai's connectionist accounts of the phenomenon of language transfer. As researchers advocating a closer look at connectionist accounts of language acquisition phenomena, we welcome Fantuzzi's discussion of the criticisms that have been leveled against connectionism, for we believe that the field of second language acquisition stands to benefit from a greater awareness of the debate surrounding the possibilities and limitations of connectionist conceptualizations and formalizations. However, we believe that Fantuzzi's criticism of Shirai (1992) was misguided, in large part because Fantuzzi missed the crux of Shirai's argument. In what follows, we will explicate this point, and will then reply to some of Fantuzzi's criticisms of connectionism in general. All of the replies will presuppose that the reader has read Shirai (1992) and Fantuzzi (1992). We will also take this opportunity to briefly discuss the role of connectionism in constructing a general theory of second language acquisition.

A REPLY TO FANTUZZI

Fantuzzi (1992) attempted to accomplish the following two goals: (1) to criticize Shirai's (1992) discussion of L1 transfer within the connectionist framework, and (2) to present weaknesses of connectionism in general.

Fantuzzi's criticism of Shirai was based on the assumption that his discussion was primarily at the level of implementation/instantiation. She argues that "the details of implementation ... are not given, and many other questions remain unanswered . . ." (Fantuzzi, 1992, pp. 321-322). However, Shirai's discussion was, in fact, at a general level.

A careful reading of Shirai (1992) would reveal that the general tenor of his interpretation of SLA findings within the connectionist framework cannot be viewed to be at the instantiation level, particularly since the purpose of his paper was clearly stated in the abstract.

> The purpose of the paper is twofold: (1) to comprehensively discuss conditions under which L1 transfer tends to occur, and (2) to explain these conditions in terms of the connectionist *framework* of second language representaition, processing, and acquisition, primarily relying on the localized connectionist model ... of Gasser (1988) (Shirai, 1992, p. 91, italics added).

In addition, Shirai stated that he "will discuss L1 transfer in such a way as to be congruent with both localized and distributed approaches" (p. 113). This clearly shows that his discuss of transfer was at the level of a general connectionist framework, not at the level of particular instantiations.

Fantuzzi (1992) further suggests that Shirai (1992) claimed radical connectionism. Although Shirai did claim that connectionism is a radical shift from the traditional symbolic paradigm, he did not claim that "radical" connectionism, among the various types of connectionist models, is *the* right approach. This is clear from the fact that: (1) he did not claim any superiority for either localist or distributed representation (p. 95), (2) he suggested that a promising way to proceed would be to adopt a hybrid approach (p. 114), and (3) he discussed the role of

innateness/prewiring in connectionist modeling (p. 103).[1] Moreover, such radicalism was not an issue in Shirai's paper, since it was an attempt to consider connectionism as a *general* theoretical framework for language acquisition research.

In sum, Fantuzzi wrongly assumed that Shirai was making very concrete and specific (i.e., microstructural) claims regarding connectionism and transfer. Indeed, she concludes with the statement that "Shirai's claim for a connectionist explanation of transfer is greatly overstated" (p. 337). Such a conclusion could have been avoided if Fantuzzi had recognized that Shirai's paper was in essence an attempt to explore a connectionist interpretation of the phenomenon of language transfer and, by extension, an attempt to consider a global theoretical framework that could be *general but cohesive enough* to integrate the various findings that have come out of studies in second language acquisition research.[2]

Fantuzzi's criticism of connectionism in general, on the other hand, should be welcomed since it provides the reader with a highly readable summary of the standard arguments against connectionism. However, as Shirai (1992) noted, the debate is still going on. For interested readers, we list a few examples of the more recent connectionist counter-arguments: Bechtel & Abrahamsen (1991, especially Chapter 7), MacWhinney & Leinbach (1991), Plunkett & Marchman (1991), papers in Davis (1992), especially Seidenberg (1992), Churchland (1992), and Horgan & Tienson (1992).

Although we refer the reader to original sources for a more detailed discussion of the debate between the connectionist and symbolic camps, we would like to discuss some points raised by Fantuzzi that are of possible interest to second language researchers. The first point concerns Fantuzzi's claim that language involves "higher-level" functions which cannot be handled by connectionism. The assumption, shared by many researchers, is that connectionism is suited to lower-level functions such as perception and memory retrieval, but not to higher-level mental processes such as thinking and reasoning. Currently, however, connectionists are trying to see how far they can extend connectionist applications to encompass higher-level cognitive processes (e.g., Rumelhart, 1989), and there has also been a sizeable increase in the number of publications on connectionist research in language in recent years.[3] This indicates an encouraging and healthy trend in cognitive science, and by

extension in theoretical and applied linguistics, since the postulation of numerous new research questions tends to increase the likelihood that some interesting (and perhaps surprising) new answers will be found.   Evidently, it is still much too early for researchers to limit the capabilities of connectionist networks, or to consign their role only to the simulation of lower-level functions.

The second point that needs to be discussed is Fantuzzi's use of the term "vague" in criticizing Shirai (1992) and connectionists.   One example is her criticism of Seidenberg and McClelland (1989), in which Fantuzzi states, citing McCloskey (1991):

> While Seidenberg and McClelland have provided an explicit computer simulation of a cognitive behavior, McCloskey argues that the underlying theory of human cognition remains vague (Fantuzzi, 1992, p. 328).

This statement, in fact, highlights an important issue of the limits of explanation and description.   As Seidenberg (1992) points out, the phenomenon of spelling-sound correspondence which was simulated by Seidenberg & McClelland (1989) is beyond precise description by categorical rules.   Indeed, it has so many exceptions that it can only be captured by "soft-laws" (Horgan & Tienson, 1992).   Such systems that evade precise characterization are numerous in language as well as human cognition.   If one works within the traditional symbolic approach, such systems have to have two processes, one for rule-based items and one for exceptions (which have to be learned by rote).   Now, for such systems that cannot be adequately handled by rules, it is impossible to predict a precise pattern of correspondence. Therefore, the only possible result is something vague.   This is exactly the limitation of the classical/symbolic approach, while connectionist networks handle such systems much better (see Pinker, 1991).[4]

The point here is that one might have to tolerate a degree of vagueness at the level of description if the phenomenon itself is vague and messy, which is often the case with human cognition. Gasser (1990) states that "Once we are willing to accept the possibility of an adult system in which redundancy is rampant, concepts are fluid, metaphor is a fundamental process, and

exceptions are the rule, our picture of the learner and our research strategy changes dramatically" (p. 196). To always expect precision may be misguided since the phenomenon to be described often resists precise description. As MacKay (1988) points out, it is precisely because theories are "flexible and general" (p. 561) that they can account for a wide range of observed phenomena. In other words, theoretical explanations can be "vague" (in the sense that they make general statements rather than precise descriptions/explanations), if they offer other advantages such as elegance, consistency, and "making sense"-ness (MacKay, 1988).

Fantuzzi (1992) also stresses the limited neural plausibility of connectionist networks. We do not disagree with Fantuzzi in this regard. Indeed, we accept that the neurally-inspired connectionist simulations undertaken thus far are still only humble attempts at "neuralness." Moreover, in saying "*to some extent*, the way connectionist learning operates is constrained by neurobiological reality," Shirai (1992) did indicate an awareness of the limits of a connectionist network's "brainlikeness" (p. 93, italics added). The important consideration, however, is whether an approach must strive for neural plausibility, or whether it can be allowed to disregard this criterion, as is often done by functionalists (e.g., Fodor, 1975; Lycan, 1991).[5] On this issue, the debate has also yet to be resolved, but for arguments on a neurobiologically constrained theory of mind, see Churchland (1986, especially chapter 9), Churchland (1992), and Jacobs & Schumann (1992).

Fantuzzi (1992) further claims that connectionist models cannot handle stages of development[6], stating:

> Gasser (1990), for example, explicitly points out that connectionist models cannot yet model "stages" of acquisition, or environmental factors or monitoring, and it is unclear how they could (p. 321).[7]

There are, however, more recent developments in connectionist modeling, some of which capture stage-like phenomena. A recent connectionist simulation worth noting, for example, is Elman's (1991a, 1991b) simulation of incremental learning, in which he simulated environmental change by manipulating the input, and also possibly the internal neurobiological changes associated with

memory capacity by manipulating the architecture of the network (see also Plunkett & Marchman, 1991; Shultz 1991). More specifically, Elman's (1991a) simple recurrent network shows how the network, using an artificial language, learns to produce sentences that are as complex as *The boys who the girl chases see the dog.* In one simulation, he did not change the quality of input all the way through the simulation, in which case the network did not learn. In another simulation, however, he first restricted the input to simple structures (which could represent the less complex nature of early caretaker speech, as well as foreigner talk) and then he gradually increased the number of complex sentences. This time, the network successfully learned both simple and complex sentences.

In yet another simulation, Elman deprived the network of part of its memory at the beginning of the simulation, then gradually increased the memory size, by manipulating those hidden units of the network that are responsible for memory and generalization. This time, even though the input condition was held constant as in the first simulation, the network learned complex sentences successfully.[8]

The most important finding, in our opinion, is the result of the simulation in which the importance of simple input at the early stages of development was demonstrated. If children have a learning capacity comparable to a connectionist network, which is very likely, they can learn complex sentences successfully if given simple input at the beginning. They will probably create a prototype based on the simple input, and generalize it to more complex/varied situations.

Elman's distributed modeling of complex, hierarchically organized syntactic information is a good example of how environmental factors and developmental change (or "stages") in language acquisition can be simulated via a connectionist network.

Finally, to counter the argument that connectionism is merely another form of symbolic implementation, an argument often referred to in the literature as Fodor & Pylyshyn's (1987) "connectionism as implementation" argument, connectionists typically argue that connectionist models are able *not only* to account for phenomena that can be easily captured by symbolic models, *but also* to account for phenomena that *cannot* be

effectively explained by them. Bechtel & Abrahamsen (1991), for example, argue as follows:

> The connectionist goal is to achieve models that give an account of the phenomena that are handled rather well by rules but also, without additional mechanisms, give an elegant account of other phenomena as well (e.g., learning and variation). *If connectionist accounts did nothing more than implement what traditional rules already do well*, they probably would not be worth the effort involved in constructing them (p. 217, italics added).

With regard to the point made above, it should be stressed that traditional symbolic models are not good at handling "soft-laws" (as discussed earlier), while connectionist networks are excellent at doing this. For example, connectionist networks are good at handling language phenomena that prove awkward for symbolic models, among them the spelling-sound correspondence of the English language discussed earlier (Seidenberg & McClelland, 1989) and the acquisition of German declensions (MacWhinney, Leinbach, Taraban & McDonald, 1989).

In sum, Fantuzzi's criticism of connectionism can be countered in many ways, some of which we have presented above. Of course, it is also possible for Fantuzzi and others to further counter some of the arguments presented here, and that is precisely our point: the debate is still on-going. What is needed on all sides is a spirit of openness that is conducive to scientific inquiry.

CONNECTIONISM AND THEORY CONSTRUCTION IN SLA

Recently, there has been increasing interest in theory construction among second language researchers. Following the publication of McLaughlin's (1987) and Spolsky's (1989) books on theories in second language learning, three symposia/conferences[9] on SLA theory have been held, and papers from these conferences have been (see Spolsky, 1990) or will soon be published. (See also Beretta, 1991 and Crookes, 1992 for

additional discussions of SLA theory.) Here, we will discuss the role that connectionism might play in theory construction in SLA.

One of the criticisms often raised of cognitive psychology is that although it has accumulated a great deal of data through empirical research, there is no theory as yet which enables us to make sense of all the data in an integrated way (MacKay, 1987, p. xiv). MacKay (1988) attributes this situation to the predominance of "empirical epistemology" as opposed to "rational epistemology." According to MacKay, under empirical epistemology theories will emerge after the accumulation of enough empirical data, whereas under rational epistemology this "critical mass" notion is rejected and theories instead emerge as "inventions, products of cognition rather than observation" (p. 561). MacKay's (1988) point is that to construct a theory, a researcher should not be bound strictly by empirical epistemology, but should instead strike a balance between the rational and empirical epistemologies.

Turning to SLA, the picture looks quite similar. The areas of investigation in this field are so broad, the approaches so varied, and the purposes so far from uniform that Long (in press) was able to come up with a list of 29 SLA theories. These differ in many dimensions such as form, type, source, and scope. It appears almost impossible to come up with one theory/framework that can account for all the empirical data.

Connectionism may contribute to the formation of an integrative theory to explain the various findings in SLA research. At the general conceptual level, connectionism can explain a wide range of phenomena. As MacKay (1988) claims, a small number of theoretical constructs such as nodes, activation, connections, and hidden units can account for a large number of empirical facts. This helps us "make sense" of a wide array of observed SLA phenomena that appear to be unrelated.

One might wonder if such general statements have much value as theoretical statements. However, MacKay claims that under rational epistemology, quantitative statements are not essential. He states that:

> quantitative expression is desirable but not essential for
> theoretical terms under the rational epistemology.
> Qualitative statements describing how hypothetical
> constructs such as nodes relate, interact, or change over time,

in the absence of mathematical descriptions or simulations of
these phenomena, still qualify as theoretical rather than
empirical statements (MacKay, 1988, p. 560).

MacKay also adds that in the history of science, progression from
qualitative to quantitative expression of theoretical concepts is the
norm, thereby suggesting both the need for general conceptual
statements at the early stage of theory construction as well as the
need for subsequent quantification/formalization. Connectionism,
of course, has the potential of formalizing its theoretical notions
by means of neural network computer simulations. This often
makes it possible for somewhat vague statements at the general
conceptual level to gradually attain greater specificity (Yap,
1992).

   In other words, there are many advantages in promoting
connectionist explanations/conceptualizations in SLA (see Shirai,
1992, pp. 93-94) since, by using a general connectionist
framework, the relationships among what appeared to be
unrelated phenomena can be interpreted in an integrative fashion.
This is the thrust of Shirai (1992). In addition, by introducing a
connectionist metaphor, it is possible to bring back more
emphasis on teaching/learning in second language acquisition
theory since connectionism focuses on learning (i.e.,
representational change, see Bates & Elman, 1992 and also Hatch,
Shirai & Fantuzzi, 1990).

   Although in Shirai (1992) the application of the
framework was limited to the phenomenon of language transfer,
connectionism may be broader in its application to language
acquisition. For example, Yap (1992) discusses how Bates &
MacWhinney's (1982; 1989) Competition Model is now
reinterpreted within the connectionist framework (see
MacWhinney *et al.*, 1989), and argues that Andersen's (1988)
Cognitive-Interactionist Model can also be reinterpreted within a
connectionist framework and can possibly be implemented by
computer simulation. Both of these models are much broader in
scope than the phenomenon of language transfer that was
discussed in Shirai (1992). In view of the call for a general theory
(Spolsky, 1989), it is important to explore how connectionism can
contribute to theory construction in SLA.

CONCLUSION

We would like to conclude this paper by suggesting the direction of possible future research within a connectionist framework, although this overlaps somewhat with what has been discussed in Shirai (1992). First, at the general conceptual level, we should try to reinterpret existing findings in SLA from a connectionist perspective. This will allow us to roughly estimate the scope of connectionist research in SLA. Based on this speculative theorizing, we can then start actual network simulations in an attempt to quantify and formalize our qualitative theoretical statements.

In summing up her criticisms of connectionism, Fantuzzi (1992) concludes that "connectionist models will probably never replace higher-level explanations in cognitive modeling" (p. 337). Although Shirai (1992) never claimed that connectionism would replace the existing symbolic enterprise, he did suggest the possibility of a paradigm shift and, indeed, it might already be on its way. Ramsey, Stich & Garon (1991) claim, "There is no question that connectionism has already brought about major changes in the way many cognitive scientists conceive of cognition" (p. 199). One major change has already come from the symbolic camp. Pinker (1991) and Pinker & Prince (1991) have argued for "a new approach" to morphology, which assumes both a rule-based symbolic representation for regulars and an associative memory for irregulars. Departing from the traditional symbolic approach, Pinker & Prince (1991) argued:

> The conclusion we draw is that generative theories are fundamentally correct in their characterization of productive rules and structures, but *deficient* in the way they characterize memory of less predictable material, which must be associative and dynamic, somewhat as connectionism portrays it. It is necessary, then, to develop *a new theory* (p. 233, italics added).

If Pinker's claim is correct, then the next question we need to ask is: To what extent can we apply productive (or symbolic) rules to explain human cognition? If, as connectionists argue, such areas are minimal, and most of our cognition is in fact organized by

"soft-laws" rather than "rules," a paradigm shift may actually be in the making.

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NOTES

[1] To elaborate on this point, Fantuzzi claims that "radical connectionists typically argue that all learning is based on the processing of input, and that there is no need to posit any a priori internal structure to the processing system at all" (p. 319). If this is one way of viewing "radical" connectionism as defined by Fantuzzi, Shirai's (1992, p. 102) discussion of innateness/prewiring in connectionist modelling clearly shows that Shirai cannot be a "radical" connectionist.

[2] Although it is a minor point, Fantuzzi's (1992, p. 336) discussion of CA (Contrastive Analysis) is also problematic. She presents Gasser's (1990) simulation as if it goes against Shirai's (1992) claims about CA. However, the two are totally compatible. Gasser's point, as presented by Fantuzzi, was that transfer appears to be a complex phenomenon involving the interaction of numerous variables, and this is exactly what Shirai claimed (p. 111); Shirai's point was that CA is only one of many factors that determine transfer. Also, Shirai was not arguing for "traditional" CA, although this was what Fantuzzi implied.

[3] Gasser (1990) reviews a number of recent simulations in the area of language representation, processing and acquisition, while Gasser and Lee report a simulation on phonological feature persistence (Gasser & Lee, 1990) and another simulation on morphophonemic rules (Gasser & Lee, 1991). More recently, Gasser (1992) reports a network model on syllable structure. Harris (1990, in press) reports on the representation of polysemous structures in lexical semantics, while Elman (1990, 1991a, 1991b, 1992) reports on recursive network simulations on the acquisition of grammatical categories and long-distance dependency (e.g., *The boys who the girl chases see the dog*). The list is far from complete, and is in fact growing. (See also papers in Sharkey , 1992.)

[4] Pinker (1991) argues that there are two fundamentally different processes involved in the acquisition/use of past tense morphology; one for symbolic rule-based memory (to deal with regular verbs), and the other for associative memory (to deal with irregular verbs), the latter being most likely handled by a connectionist-like network.

One wonders, however, whether these two systems are totally distinct, or as Harris (in press) suggests, whether there is not, in reality, a rule-analogy continuum.

[5] It is interesting that Fantuzzi (1992) criticizes connectionism for lacking neural plausibility when, in fact, most symbolic modelers regard neural plausibility as unimportant. In any event, connectionist networks have more in common with real neural networks than symbolic models do (M. Gasser, personal communication, March, 1992).

[6] Another counter-argument to the claim that connectionism is unable to handle "stages" is made from a methodological standpoint. It is suggested (see Bechtel & Abrahamsen, 1991; Schmidt, 1988) that what appear to be "stages" are not that clear-cut, and in fact it is "stage-like" behavior that language acquirers exhibit. It may be the case that the symbolic approach, which tends to assume distinct stages, has imposed stages where there are none. In SLA, for example, Andersen (1991) questioned the four-stage negation continuum (e.g., Cazden, Cancino, Rosansky & Schumann, 1975) which is assumed to exist, and argued that the development is not as clear-cut as the four-stage model suggests.

[7] M. Gasser (personal communication, February, 1993) has since updated his views on this issue and now agrees that connectionist networks do have the capacity to capture "stages" of acquisition.

[8] This simulation is also interesting in that it suggests that memory size is a possible reason for the critical period observed in second language acquisition. That is, children's limited memory may be an important condition for successful syntactic acquisition (see Newport, 1990 for a similar account of the critical period).

[9] They are the Colloquium on the Scope and Form of a Theory of Second Language Learning held at 1990 TESOL in San Francisco, the Conference on Theory Construction and Methodology in Second Language Research held at Michigan State University in 1991, and the Workshop on Theory Construction in Second Language Acquisition held in Washington, D.C. in 1992.

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REVIEWS

Immigrant Languages of Europe edited by Guus Extra and
Ludo Verhoeven. Clevedon, UK: Multilingual Matters, Ltd. 1993.
326 pp.

Reviewed by
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The focus of *Immigrant Language of Europe* is on immigrant
groups and their languages in the highly industrialized nations of
Western and Northern Europe. We shall look first at some
fundamental concepts on which the articles in this volume are based,
and then look briefly at each of the articles themselves.

In the first place it is important for American readers to be
aware of a few significant differences between the relative language
situations confronting immigrants to the U.S. and those to Europe.
In the U.S. the immigrant enters an overwhelmingly monolingual
culture, whose language is at the present time the preeminent
language in the world for all activities which take place on a trans-
national economic, cultural, and political level. In Europe, on the
other hand, the immigrant encounters a culture where the idea of a
multilingual education is much more common. This is especially
true in countries where the majority language has comparatively little
international currency and where the educated inhabitant will
probably speak at least one or two of the major languages of
Europe, besides the dominant language of the country. The
immigrant in Europe faces, therefore, many other prestige languages
besides English.

A related issue which it is important for the reader to
understand is that the concept of European Community (EC)
languages has the connotation of referring to the national or official
languages of the EC member states, very rarely referring to
indigenous or non-indigenous minority languages (Extra &
Verhoeven, p.5). Therefore, at the expense of indigenous or non-
indigenous minority languages, we see a standardizing of the
national language within national borders under the influence of
mass media, tourism, labor migration, international trade, and many
other factors, accompanied by a strong linguistic nationalism with
respect to the national language which shows no signs of abating in

front of the increase in the membership of the Community over the coming decades. This development in itself is not so strange to an American observer; however, the great linguistic diversity of the EC as a unit is quite different from the American condition.

Another issue is the difference in the nature of immigration in the two countries. In the U.S., immigrants traditionally have arrived with the intention of remaining and putting down roots in this country. The traditional expectation, in fact, was that immigrants actually should "assimilate" so that a Russian or a Chinese immigrant would eventually become American. In Europe, especially since the strong development of the European Community over the past couple of decades, immigrants have traditionally been thought of as "migrant workers," or *Gastarbeiter*, but who gradually brought their families, and raised their children, and now we see a shift in denotation accompanying this demographic shift, from migrant worker to immigrant family to ethnic minority (Extra & Verhoeven, p.4), thus creating a situation more similar to the U.S. experience.

Turning now to an overview of the organization of this volume, the first part provides a general discussion of immigrant language varieties in Europe. The focus of Part 2 is on processes of first language acquisition in a second language environment. Part 3 provides a study of code switching, and the fourth part looks at language maintenance and language loss. In order to permit cross-linguistic comparisons, different languages are discussed throughout the four parts.

The four chapters of the first part deal with immigrant languages and how they respond to the pressures from the majority language. Specifically, Finnish in Sweden, the languages of South Asia in Great Britain, and Turkish and Moroccan Arabic in the Netherlands are all considered. Croatian and Serbian in diaspora throughout Western Europe are also studied. In the first of these chapters, Finns in Sweden have shown a language shift to Swedish after two or three generations (as is common also with Finns in the U. S. and Canada, p.26-27). "Semilingualism," the condition where the L1 of adults, and especially, of first-generation children, begins to vary from the language as it continues to be spoken in the original speech community after the people have been living in the L2 environment for some time and without full and regular contacts with the original L1 environment, is a common experience in both Europe and the U.S. The L1 in these L2 circumstances has a reduced scope

for application and lacks the input of the new developments in the language which are occurring in the meantime. (For further discussion on this subject, see also Kalantzis et al., 1989, pp. 29-34) This problem of "Semilingualism" has necessitated, in Turkey, for example, that the Turkish government provide special school programs for the many Turkish youngsters returning from Germany, whose parents have brought them back to Turkey, and who find that the children are quite far behind their peers in language skills. (E. E. Talu, personal communication). "Semilingualism" is not uncommon in the various immigrant and minority language communities in the U.S., either.

The second chapter studies the South Asian languages in Great Britain. The efforts at language maintenance of the South Asian communities as well as the current distribution and use patterns of these languages are discussed. The third chapter looks at evidence from recent research on minority languages in the Netherlands. The focus is on Turkish and Moroccan Arabic as these constitute the major Mediterranean languages in the Netherlands. After this introduction the authors outline a current research program supported by the Dutch Science Foundation in cooperation with the University of Nijmegen. The aim of the research is to study the processes of language change over time in these two communities, which represent the largest Mediterranean groups in the Netherlands. In the fourth chapter, the development of Croatian and Serbian language varieties in Western European countries is described. The author focuses on the social and demographic background and the self-reported L1 and L2 proficiency of children in the countries of immigration also studies the children's actual proficiency in both L1 and L2 by means of a multiple-choice grammar test and a composition task.

Part 2 of Extra and Verhoeven's book deals with the issue of L1 acquisition in an L2 context. In the fifth chapter the author investigates the acquisition of Turkish in Berlin. She describes major research projects with her main focus being on the functional development of conversational competence in a bilingual context. The second study on L1 acquisition in an L2 environment also concerns Turkish children but now in the Netherlands. The author studies a group of 11-year-old children and their language proficiency at the lexical, morpho-syntactic, and discourse levels. She is mainly concerned as to the degree to which these levels are affected by language erosion and has found certain evidence to this

effect at least at the lexical and morpho-syntactic levels. The third study in this part of the book is an attempt to assess diagnostically the ethnic language proficiency of Turkish and Moroccan children at the end of primary school. (A very interesting discussion of questions of evaluation of the L1 and L2 proficiency of German and Macedonian immigrant children in Australia can be found in Kalantzis et al., 1989, pp. 91-130.) Oral measures for vocabulary and listening comprehension and written measures on the level of lexicon, syntax and text were undertaken. Parents' attitudes towards bilingualism are very important in a discussion of ethnic community languages, and the final chapter of this part of the book deals with this issue. The author of this chapter gives an empirical account of such attitudes in the Nordic countries and finds, not surprisingly, that parents generally want public support of their languages. Although dealing almost entirely with English-speaking contexts, Edwards (1984) contains several chapters on the relationship between multicultural policy and education issues. Especially interesting in this regard are Jim Cummins (1984) and William F. Mackey (1984).

Code-switching is the topic of Part 3. The authors of the four chapters in this part would agree with Fishman (1971) that "both interference and switching are related to the domains and variance sources of bilingualism, on the one hand, and to socio-cultural processes and type of interaction, on the other." The first chapter opens the discussion with a study of basic principles of language change among Turks in Scandinavia and Germany. The author criticizes the basic concepts of traditional contact linguistics, such as "borrowing," "transfer," and "substitution," and, claiming that the elements of the majority language merely serve as "models of imitation" (p.201), he prefers the concept of copying as providing better insight into the processes involved in interactions between languages in contact. On the basis of the Turkish data, the author outlines various types of copying processes, such as "global copying," which is the insertion of blocks of speech from the other language, and "selective copying," where only selected bits of the second language serve as the model for imitation. The focus of the next chapter is Turkish-Dutch code switching among Turkish adolescents in the Netherlands. The empirical data are explained in terms of both the sociolinguistic markedness model and the frame-process model. Both of the above chapters bring out the point that younger people, with greater proficiency in both the majority and the

minority languages, will vary the degree of code-switching. They will speak Turkish with little L2 switching with older family members and strangers in the Turkish community but use a high degree of code-switching in in-group situations with their peers. The status of Dutch single word switches in the language use of Moroccan adolescents in the Netherlands is the topic of the next chapter, and the question is raised whether it is appropriate to consider single word switches as a separate category rather than as a particular type of intrasentential switching. The final chapter of this part is a comparative study of code switching patterns among Finns and Americans living in Sweden. According to the study, Finns tend to integrate Swedish items whereas the Americans tend to use the Swedish items in an unintegrated way, which the author explains in terms of the structure of the languages involved, the social context of immigration and the degree of linguistic neutrality.

The concluding Part 4 of this volume deals with aspects of language maintenance and language loss. According to Fishman (1971), language loss and shift are due in part to "the general inability of dislocated populations to maintain domain separation and, therefore, a sufficiently distinctive functional allocation of codes in their verbal repertoires, such as to render their mother tongues necessary for membership and status even in the home, neighborhood and other intra-group domains." The first chapter of this section studies immigrant minority languages in Sweden. The author shows that language shift in the second generation is widespread despite an official government policy of support for freedom of choice and home language instruction. She expects, however, this pattern to change because of the recent increase in immigrants from more distant countries than hitherto experienced in Sweden and the larger numbers of such immigrants. Chapter 14, the next chapter in this section, gives an empirical account of the maintenance of the Romani language, used by the gypsies of Europe and composed of a great many dialects. Romani is undergoing a period of profound change under the differential influence of the various majority languages its speakers encounter, changes which are rendering the dialects more and more mutually unintelligible. There is also a definite threat that the language will die out entirely as fewer and fewer children are proficient in it. Deliberate attempts at reversing this trend, for example, creating a dictionary of the most common dialect words and creating a standardized literary language, are also discussed. (Interesting further discussion of issues of

language standardization and literacy are to be found in Coulmas, 1984.) The final two chapters deal with language attrition. The first of these discusses methodological issues regarding language shift research, presenting data on social conditions influencing language shift among Italian and Turkish immigrants in the Netherlands and Flanders. For example, the authors look at the choice of language in different social situations, the subject's social, cultural and educational background, language proficiency, and attitudinal and affective factors. The concluding chapter is a study of lexical aspects of language attrition and shift, concentrating on the development of the migrant's native language in a country where this is not the dominant language. Explanations of lexical loss depend to an important degree on the underlying account of how the bilingual lexicon is stored in memory. The authors review four such accounts. The *extended system hypothesis* represents languages as undifferentiated in the memory, each being a different surface representation of the same underlying concept; the *dual system hypothesis* claims that each language is represented independently; the *tripartite system hypothesis* places those elements which are identical in both languages in a single common neural substratum while those that are different have each their own separate representation; and, finally, the *subset hypothesis*, favored by the authors, assumes the use of a single storage system where links between elements are strengthened through continued use.

An interesting historical perspective on the influences of a "prestige language," analogous in many ways to the relationship of the majority language *vis à vis* the minority language or languages of immigrants and *Gastarbeiter*, can be gained in Kahane (1986). A classic in the field of languages in contact is Weinrich (1970), which should be consulted for most of the themes touched on in this volume under review.

The principle focus of this volume, as its title suggests, is the minority languages themselves and how they are impacted by their contact with the co-areal majority language. This focus is important and somewhat different from the usual American focus on the influences of the immigrant languages on the acquisition of L2 English, or the usual European focus on the development of the national language to the neglect of both indigenous and non-indigenous minority languages. There is noticeable overall bias in the direction of broad support for "multiculturalism" and "pluralism," but Kalantzis *et al* (1989, pp. 7-28) provide a salutary

discussion which puts these concepts in some perspective. Anyone who is interested in the issues of minority language survival, the linguistic adaptation of immigrant communities to the majority language and culture, and even the general issues of European, and especially EC, response to one part, at least, of the monumental changes occurring in European society, will find this a highly useful book.

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Focus on the Language Classroom: An Introduction to Classroom Research for Language Teachers by Dick Allwright & Kathleen Bailey.   Cambridge, UK: Cambridge University Press, 1991.   vii + 250 pp.

Reviewed by Betsy Kreuter
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Currently the field of applied linguistics is wrestling with its own identity. In the struggle to clarify the field, second language teaching and applied linguistics research are often discussed as if they are mutually exclusive pursuits. While most in the field agree that an interdisciplinary approach is necessary, far fewer include the language classroom as part of their interdisciplinary approach. Some applied linguists, in fact, would like to be freed from concerns with educational application. Sophisticated research programs do not want to be involved with teacher training (See the roundtable discussion in *IAL,* 1992).

Nevertheless, the field of applied linguistics has strong roots in language teaching and there is a growing body of classroom oriented research (Seliger & Long, 1983; Chaudron, 1988; Van Lier, 1988; Nunan, 1989). Moreover, interest in teachers as researchers is increasing.   With the advent of teacher-conducted research, classroom teachers can be party to the excitement and intellectual involvement of academic research activity. Teachers and graduate students need not be freed from the classroom. Rather, they need to be given the freedom, as teachers, to take part in as rich an intellectual community as the researchers who have traditionally advised teachers on the basis of the latest, presumably research-proven method (Nunan, 1989; Pennycook, 1989).

In order to create effective classroom teacher researchers, Allwright & Bailey have written *Focus on the Language Classroom: An Introduction to Classroom Research for Language Teachers*, an accessible, yet unpatronizing introduction to teachers and/or graduate students who would like to conduct research in their (or their colleagues') classrooms. The book has three principle purposes: to give an extensive review of classroom research conducted to date; to show how this research is relevant to language classrooms; and to introduce the techniques of classroom research so that teachers can conduct research on their own.

Throughout the five main sections of the book, the authors emphasize the importance of developing exploratory teaching which provides active roles for professional researchers, teachers, and students.   The first part of the book introduces the historical background and the current relevance of classroom research. The second part offers a detailed description of approach and methodology of classroom oriented research.   The third, fourth and fifth parts introduce current studies in three main areas of classroom research: oral error, interaction analysis, and student receptivity. The epilogue makes up a sixth section which further contextualizes the authors' introduction to classroom research.

Part One of the book is divided into two chapters and provides definition and justification for classroom research. In the first chapter, the authors introduce the research-teaching dichotomy and propose classroom research as a missing "process" link needed in much second language research. The Pennsylvania Project (Smith, 1970) illustrates the problem with some research which is divorced from direct classroom observation.   This method study was aimed at demonstrating the superiority of audio-lingual techniques to traditional techniques, but the results of this long-term, huge-scale project were inconclusive, largely because no observations were made inside classrooms.   Most teachers probably didn't adhere to one specific method. In fact, teachers usually pick and choose techniques from various methods, using those activities which are appropriate for their immediate purpose. By investigating such choices and the processes that lead to them, classroom research may provide a more effective form of study than research which ignores classroom interaction. Originally method studies were done to prescribe a method which teachers could learn in their teacher training programs. Now classroom research supplies descriptions of interaction in language classrooms and leads to more fundamental insights.

Chapter two elaborates on the unique make-up of every classroom.   Although planned aspects such as method (how to teach), syllabus (what to teach), and atmosphere can be dictated by external researchers, what goes on in the classroom may be highly variable, as the Pennsylvania Project exemplifies. Any classroom investigation must view a lesson not as teacher-created, but as co-produced through the interaction between the teacher and the students. Though the syllabus and method may be pre-ordained, and a particular atmosphere may be recommended by external

authorities, the interaction in the classroom determines how much of this syllabus is learned (input), how method is implemented (practice), and how well the atmosphere is created or perceived by the students (receptivity). This chapter also includes helpful explanations of the research terminology used to discuss such interaction.

Part Two further prepares teachers to do classroom research on their own. Chapter three deals with the initial steps of research. While the authors present both theory-driven experimental research and data-driven ethnographic research, they clearly favor action research for the investigation of practical issues in the classroom. Action research is described as a seven-part cycle which closely resembles a generic experimental research cycle (See Seliger & Shohamy, 1984). In action research, however, the specific plan for classroom action, rather than a hypothesis, is revised in order to further investigation. The authors also introduce the traditional experimental research terms, reliability, generalizability and validity using definitions that will be helpful to the classroom researcher.

After introducing terminology and different approaches to classroom research, Allwright & Bailey describe specific methods for collecting data in chapter four. The authors present discourse analysis as the predominant form of data collection in classroom research and draw many parallels with anthropological research. The observer's paradox, for example, first articulated by an anthropologist (Labov, 1972), suggests that researchers inevitably interfere with the situation being observed. Instead of fighting this paradox by keeping the subjects in ignorance, the action-research paradigm includes both students and teachers as active participants in the research. This not only alleviates artificial tension, but also recognizes the "subjects" as valuable sources of insight.

Part Three discusses oral errors and Chapter five begins by briefly summarizing the difference between contrastive analysis and error analysis. In discussing error, the authors identify several problems in its definition. Once an error is identified, error-treatment must be carefully applied. To illustrate the complexities of error treatment, the authors compare native-speaker misunderstandings and teacher-student misunderstandings. Drawing on Schegloff, Sacks & Jefferson (1977), the authors illustrate clear-cut differences between authentic native speaker and language classroom repair patterns, indicating that teacher fronted

classrooms, dominated by teacher-initiated repair may not be displaying authentic discourse patterns.

Chapter six addresses the problem of classroom error treatment in further detail. The authors emphasize the need for good teacher feedback in both the cognitive and the affective domains.   As the authors discuss possible teacher treatment strategies, they review findings and raise questions about whether to treat error, when to treat error, and what treatment to use. The authors suggest that the more cognitive work involved on the part of the student, the better. Ideally, classroom repair should more closely approximate authentic repair patterns, working eventually toward self-monitored learning, or in Schegloff's terms, "self-initiated, self-repair."

Part four examines input and interaction in the language classroom and is divided into two chapters. Chapter seven introduces the most well-known research on input and interaction and provides a clear summary of the difference between Krashen's theory of comprehensible input and Long's theory of interaction. Chapter eight expands on the notion of interaction in the language classroom by discussing teacher talk, learning strategies, forced participation, and group work in light of the theoretical discussion of interaction just presented in the preceding chapter. The section on groupwork, for example, cites several sources which indicate that, in general, groupwork and pair-practice lead to more contributions on the part of the student, more extended interactions, and more negotiation of meaning than a teacher-fronted classroom situation. Throughout the discussion of interaction in the classroom, however, the authors remind the reader of the need to account for both observable and non-observable behavior. Although it seems that interaction is important, we need methods to measure egocentric interactions as well as other non-observable behaviors in the classroom.   Allwright & Bailey suggest a number of research techniques including think-aloud approaches, retrospection, and questionnaires, as means to explore unobservable behavior.

Part five introduces the concept of receptivity, a term which Allwright & Bailey adapted from Stevick (1976) to describe the openness which students have towards learning the second language. This term is analogous to the Social, Psychological and Affective (SPA) terms more commonly used in applied linguistics research in both formal or naturalistic settings. However, Allwright & Bailey use the term receptivity specifically for classroom learning.

In chapter nine they identify eight aspects of the classroom which influence receptivity: the language and its culture; the teacher as a person; the other students; the teacher's way of teaching the course content; the course materials; the idea of success in the language; and the idea of communicating with other people. The authors supply concise definitions of each of these categories and include brief, relevant examples. In chapter ten, the authors discuss a variety of classroom research in relation to the eight categories of receptivity. They emphasize the potential for diary studies to shed light on the language classroom. They liberally cite Bailey's (1983) diary studies and Schumann & Schumann's (1977) study about their experience learning Farsi and relate them to several categories of receptivity. While diary studies are not an end in themselves, the questions they raise can lead to the formation of plausible models which foster relevant classroom research.

The epilogue provides further practical suggestions for the budding teacher-researcher. In the future, the authors propose that the professional researcher serve at a given school as a consultant, advising other teachers how to go about doing their own research, rather than imposing his/her particular research agenda on those teachers. Other classroom teachers can collaborate by first brainstorming their ideas about relevant problem areas, then dividing the reading of previous background research, conducting their classroom studies, and finally producing a write-up for conference presentation or publication.

In keeping with the philosophy that teachers should become their own best researchers, the authors provide suggestions for further reading, discussion starters and various research project ideas at the end of each chapter. These exercises are realistically devised and highly useful study aids. The suggestions for further reading provide manageable lists of relevant literature and brief synopses of each listing. In addition, the discussion starters encourage students to apply the new information to their own classroom experiences and to conceive of the various flow charts not simply as artifacts to organize information, but as tools which can be used to analyze real data. Each chapter also includes mini-projects which encourage the reader to apply the concepts of the preceding chapter to their own language learning or teaching experience. Four of the chapters also include major projects. The explicit directions for these projects almost ensure that they will be done. These are

not cursory suggestions or simple examples, but actual guides which encourage original research.

As these major projects demonstrate, classroom research, particularly action research, encourages the teachers to seek and provide answers within their own, or their colleagues' classrooms. Thus, classroom research differs from the traditional research cycle which seeks answers in a more controlled environment, while still maintaining the same active and never-ending curiosity that accompanies traditional research. Teachers should be able to experience research as a cycle, not simply as an end dictated from some lofty research institution. *Focus on the Language Classroom* is a valuable first step in the re-definition of the teacher, not merely as a cog in the machinery of education, but rather as the "transformative intellectual" encouraged by Giroux (1989).

Without a doubt, this volume is an essential for any graduate course in classroom research, or for any language teacher or graduate student who feels a disturbing gap between ambitious university research and the diluted suggestions passed down and minimally applied in language classrooms. The inspiration and insight provided in *Focus on the Language Classroom* suggests that classroom research is an exciting new direction for applied linguistics.

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Science, Medicine and Technology: English Grammar and Technical Writing by Peter Antony Master.   Englewood Cliffs, NJ: Prentice Hall Regents, 1986. xv + 335 pp.

Writing Up Research: Experimental Research Report Writing for Students of English by Robert Weissberg & Suzanne Buker. Englewood Cliffs, NJ: Prentice Hall Regent, 1990. vi + 202 pp.

A Comparative Review of Two EST Writing Textbooks by Lawrence Lem
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        The ultimate goal of a writing instructor is to prepare his/her students to write in "the real world". Likewise, the purpose of a writing textbook intended for use by ESL learners in science or academia is to enable the student to communicate in the scientific discourse community. Consequently, the goal of such EST textbooks is to convey to their users the currently accepted conventions of writing for professional/academic audiences. This review will examine two recent texts, *Science, Medicine and Technology: English Grammar and Technical Writing* (1986) by Peter A. Master and *Writing Up Research: Experimental Research Report Writing for Students of English* (1990) by Robert Weissberg and Suzanne Buker, and evaluate their methods for achieving this goal.
        Science, Medicine and Technology was written for "foreign students who are studying or have studied science, medicine or technology." It aims mainly at exposing the student to a variety of "rhetorical patterns," as Master describes them, which are common in scientific writing. Such patterns include rhetorical modes such as the amplified definition, the description of a process, and the research/feasibility report. In reality, these patterns appear to be more like written products rather than rhetorical modes and the author's presentation of them seems to be product-oriented. In each of the six units, the structure of the pattern is presented and each part's function is analyzed. Several authentic models are given for each pattern. The models are appropriate for the difficulty level, both in content and grammar. A subsequent exercise asks students

to analyze the models according to the outline presented, followed by a free writing exercise requiring students to write in that pattern.

While Master's choice of models is good, several weaknesses appear in his use of them. Rose (1983) has commented that when models are used to teach organizational patterns, too often the patterns end up being "conceived of or taught as 'modes' of discourse or as rigid frameworks." Master has fallen into this trap. Despite his excellent, detailed analysis of the patterns, Master does not effectively apply it to the analysis exercises in the text. He gives no specific directions on how a student might go about analyzing a model other than in comparison with his outline of the patterns. Students need more guidance on how to analyze while reading in order to make the most of the models given. Scardamalia & Bereiter (1986) remark that although students will learn much about the written product from reading examples, "reading typically furnishes no clue to the process by which the literary work was brought into existence." Exercises containing fair amounts of guidance are needed to encourage and guide the students in reading models rhetorically (Hairston, 1986), so that the students better understand the reasoning behind the organization. It is the strategies (Rose, 1983) that they need to acquire along with the pattern structures.

The majority of each of the units in *Science, Medicine and Technology* is not composed of the rhetorical structure lessons and models, but grammar lessons and exercises. The range of grammar topics addressed is quite extensive, ranging from articles to negation to sentence subordination. Master's coverage on articles is particularly noteworthy and comprehensive; each unit contains a section covering a particular aspect of their usage. Although these grammar drills may have some value in helping to produce the chunking of operations described by Purves & Purves (1986), Hull (1985) notes that the efficacy of drills in helping students to produce an errorless text has been called into question in recent years. Another drawback to the grammar sections is that most of the exercises are sentence level; almost none force the student to work with a whole discourse. Master notes in the preface that "no attempt is made to make the grammar exercises communicative." His encounters have suggested to him that science students are accustomed to "formulaic presentations" and find the communicative activities "unproductive." Such an evaluation may well prove true for classroom activities, but surely the students have a need to see the grammatical structures within a discourse context. The ability to

use such grammatical structures in writing is dependent not only on the ability to form them, but also on knowledge of when to use them (Purves & Purves, 1986). Without seeing them at the discourse level then, the students may not learn to recognize the appropriateness of a particular structure and how various structures combine to produce a specific rhetorical effect.

Weissberg & Buker, like Master, approach the teaching of scientific writing with a product-oriented approach in *Writing Up Research*. The book is designed to train writers to produce the various sections of a research report and the units are divided accordingly, one section for the abstract, another for the introduction (three sections, actually) and so forth.

One might note that real scientists do not usually prepare their papers in the order of the structures presented in the book. In fact, a study by Rymer (1988) suggests that one of the later parts of the paper is actually composed first, i.e. the results section, by often-published successful scientists. The text sequence does however place the rhetorically simpler parts of a paper earlier in the lesson sequence, which is reasonable from a pedagogical perspective.

The exercises in *Writing Up Research* seem to indicate an emphasis on learning by doing: the students are expected to learn to write by reading authentic journal articles from their field and then analyzing them in a number of ways. The sequencing of the exercises is also effective, each exercise requiring a greater internalization of the writing mode and structure. For example, in the unit on literature reviews, Unit 3, the exercises begin with an analysis of a provided literature review; Subsequent exercises require ordering citations that have been randomly jumbled. Students are then asked to do a library search for articles which they can then analyze for their literature review, before doing a guided writing exercise in which a context is set for them. Then the students are ready to produce their own review. Students are also asked to conduct their own research projects, which provides them with authentic data to write about during the course. The free writing exercises consist of writing the various sections (e.g., introduction, abstract, etc.) for a research paper on this project. One should also note that a number of different exercises focus on the same piece of text, which forces the student to deal with the same text in a number of ways.

One of the strengths of the exercise sequence is that it is designed to teach the student to read rhetorically. The questions presented guide the student to read for not only the presence of a particular grammar structure, but for the purpose in using the structure as well. Such an approach aids students in understanding the process behind the writing and constitutes a good use of models (Hairston, 1986). The fact that students are required to do library work certainly is a benefit in that it grants students greater exposure to the variety of texts used within their field of study, exposure that serves as "the appropriate input for acquisition of writing skills" (Eisterhold, 1990)

Unfortunately, some of the models chosen by Buker & Weissberg are too simple and do not reflect an authentic text's grammatical level. In general the contents of the whole textbook are overly simplified though its intended target audience is "high-intermediate and advanced ESL/EFL university students at the upper division or graduate level". The simplicity does not seem to be appropriate for the advanced student in the opinion of the reviewer. While the exercises help a student to read rhetorically, they also seem to be too simple to challenge an advanced student.

Weissberg & Buker's grammar sections are less comprehensive than Master's. While they are simple, they are rhetorically relevant to the units in which they are placed. The grammatical exercises are fairly contextualized, almost all being placed in the context of an entire discourse. Again, like the rhetorical exercises, the grammatical exercises tend to be simpler than necessary for advanced ESL students.

Overall, both Master's book and the Weissberg/Buker book are well-written, each having its strengths and weaknesses. Master puts forth very detailed analyses of both the rhetorical patterns and grammatical structures, but does not focus on teaching rhetorical reading in the use of his models. Neither does Master base his grammatical exercises on a discourse context, although the omission is a conscious one. Weissberg & Buker, on the other hand, do base their grammatical exercises on discourse pieces. Their rhetorical pattern exercises are well sequenced, with progressively decreasing amounts of guidance given. They also make good use of their models in teaching rhetorical reading. Teachers who choose either book would not be making a poor choice. They must simply be aware of how each book does or does not reflect reality in scientific

writing and must consequently complement the weaker areas with their own teaching.

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