

LEXICAL CONVERGENCE AND LANGUAGE ACQUISITION

*Jens Allwood & Elisabeth Ahlsén
Department of Linguistics
University of Göteborg*

1. Aim

In this study we want to investigate the role of lexical repetitions (ie "inter-speaker" repetitions) in conversation between second language learners and target language speakers. our interest mainly focuses on how lexical repetitions can potentially be part of the language acquisition process. For example, we want to find out whether language learners use lexical repetitions more than native language speakers in similar types of conversation and if target language speakers use more lexical repetitions when talking to language learners than to other native speakers. We also want to compare the amount of lexical repetitions produced by language learners with two different native languages and different cultural background (Finnish and Latin-American Spanish speaking) and by native speakers talking to these language learners. In addition to this, we want to see what possible functions of lexical repetitions are found in spoken interaction learner - target language speaker (TLS).

The study is, thus, concerned with:

- a) the frequency of lexical repetitions produced by the language learner and the target language speaker
- b) the possible/probable functions of learner and TLS repetitions in context
- C) the possible relation between the function and frequency of lexical repetitions and the language acquisition process.

2. Background

2.1. Convergence

The fact that the linguistic expressions of most speakers in most types of spoken interaction show a good deal of similarity has been attested in several studies (cf Brenner & Hjelmquist 1977, Giles & Smith 1979 and Tannen 1981). For example, people in conversation seem to adjust themselves to each other's tone of voice, movement patterns etc. This tendency affects also the vocabulary of speakers in conversation. We will refer to this phenomenon as

- i) a biological tendency to adjust to other individuals in the environment, found also in animals and in early mother-infant communication (Trevarthen 1977),
- ii) a social tendency to adjust in order to gain and show social acceptance and group membership (e.g. Giles & Smith 1979, Tannen 1981).
- iii) a strategy for understanding' 6 and making oneself understood (e.g. Allwood 1976).

As far as we can see, there is no reason to believe that any one of these explanations excludes any of the others. Linguistic convergence is probably a result of convergence in another sense, namely **causal convergence**.

2.2. Convergence and language acquisition

our purpose in this paper is to study how the general tendency of convergence is related to second language learning. our general hypothesis is that certain of the functions that convergence normally has between accomplished language speakers are strengthened and made use of in interaction between the TLS and the learner and that some of these functions also have an important relation to language acquisition.

Lexical convergence might, for example, have an effect on memory or on the relation between production and perception. Its perhaps most obvious function is to enable the learner to make use of the TLS as a resource.

Lexical convergence is also an indicator of such things as power relations and ethical considerations between learner and TLS (cf Allwood 1980). The TLS is, of course, in a more powerful position, due both to social role and to differences in linguistic and cultural skills. This might affect language learning in many different and subtle ways, by means of creating a certain emotional atmosphere or a certain type of social relation which both in combination perhaps only allow for certain types of language use.

2.3. Lexical repetition and language acquisition - Some hypotheses

The main question of this study is whether and to what extent lexical repetitions are used by the learner to acquire the vocabulary of the target language. We will here and below mostly use the term lexical repetition rather than the more general term lexical convergence, since we believe that in relation to language acquisition the most relevant form of convergence is repetition.

We have the following three general hypotheses about the occurrence of lexical repetitions:

- 1) that all conversations contain lexical repetitions

We assume that the learner will repeat the following types of expressions from the TLS utterances (L functions):

language speaker's speech, (L functions),:

- i) words/phrases that he/she understands, in order to keep the conversation going and gaining time and more input, so that he/she can understand more (the "key word" strategy)
- ii) words/phrases that he/she does not understand, in order to get clarification, explanation, paraphrase from the target language speaker (Often such expressions are accompanied by a question intonation).
- iii) words/phrases that he/she wants to try out, in order to get corrections or see if they are accepted in the context
- iv) new words/phrases that the target language speaker has introduced, in order to show that he/she (the learner) can use them and/or to strengthen social adjustment and interactive smoothness
- v) words/phrases that are very important in their context, in order to make sure that there is good understanding.

We assume that the target language speaker will repeat the following expressions from the learner's speech (TLS functions):

- i) words/phrases that he/she understands, in order to get more information
- ii) words/phrases that he/she does not understand, in order to get clarification, explanation, repetition or paraphrase
- iii) words/phrases that he/she wants to correct
- iv) words/phrases that the learner has shown that he/she knows, in order to adjust and make communication smooth
- v) words/phrases that are important in order to ensure understanding.

Some criteria for supposing that lexical repetition has a function in relation to language acquisition are that:

- a) there are more words in common between the learner and the TLS than in the same activities with target language controls
- b) uncommon words are repeated
- c) words that have not occurred earlier in the conversation are repeated when they have been introduced.

Repetitions are not counted as interesting in relation to language learning when the repeated word is introduced in the conversation correctly by the

conversations and the use of these word categories are also of interest, but they have not been specifically studied here. They have, however, been included in the type/token ratios.

The data used for the study came from:

4 learner informants (2 Finnish, 2 Latin-American Spanish speaking) and their Swedish interlocutors,

2 Swedish controls in the same activities and their Swedish interlocutors,

2 activities: conversation and "post scene", i.e. a play scene in the studio where the learner pretends to visit a post office and to send a parcel to another country,

3 recordings of each activity for the learners (a few months after their arrival in Sweden, one year later and two years later). The Swedish controls were only recorded once for each activity.

This makes a total of 28 activities, which have an average duration of 30 minutes. All the activities were transcribed and analyzed. Both quantitative and qualitative analysis was used. The number of turns for each participant, containing lexical repetition, was calculated in relation to the total number of turns for this participant, as a crude measure of the amount of lexical repetition. An interindividual lexical repetition was operationalized as a complete or partial repetition of a noun, verb, adjective or adverb or of an expression containing at least one of these categories. The repeated items should have been produced by the other speaker within the scope of ten preceding turns. The number of turns for each participant consisting only of simple yes/no/mm feedback was also counted for comparison, since yes/no/mm feedback, like lexical repetition, can be used as a "strategy" by language learners. By a "turn" we mean speech from one person, when he/she has the right to speak, until the right passes to another speaker or the speaker terminates. Short feedback givers, like "mm" during another person's speech, are not counted as turns. In the tables below, the number of turns is not necessarily the same for the learner and the target language speaker in a conversation, since other persons, which are not included in the study, were present and to some extent participated in the conversation as well.

Type/token ratios were calculated for all the activities, in order to indicate the total frequency of word form repetition, ie including all kinds of words, (also function words). The type/token ratio together with the total number of words produced indicate a general degree of convergence, where a low ratio in combination with a not too small total number indicates a high degree of convergence.

For the analysis of functions of lexical repetitions, words and expressions that were repeated in each conversation were listed, with the help of concordances, and each example was studied in its context and related to the hypotheses above. Patterns of lexical repetition that were found in the interactions were also noted.

- i) recording : the numbers indicate the three points in time when the activity was recorded
- ii) TURNS = the total number of turns produced by an informant
- iii) %YNM = the percentage of informant turns containing only *yes, no or mm*
- iv) %REP-7-- the- percentage of informant turns containing a repetition (of noun, verb adjective, adverb or expression containing one of these word classes).
- v) TLS = the TLS participating in the recording (The TLS is not necessarily the same in all three recordings).

Table I concerns conversation and table 2 the post scene.

Table 3 summarizes tables I and 2 in terms of mean values for each activity and "source language group" (Finnish, Spanish and Swedish).

Table 1.

CONVERSATION

LEARNER/CONTROL TURNS %YNM %REP TLS TURNS %YNM %REP

FINNISH: recording

| | | | | | | | | |
|---------|---|-----|----|----|-------|-----|----|----|
| Tarja | 1 | 44 | 47 | 9 | Sigge | 50 | 12 | 12 |
| Tarja | 2 | 68 | 41 | 11 | Sune | 67 | 20 | 4 |
| Tarja | 3 | 25 | 48 | 8 | Sune | 43 | 27 | 4 |
| Volmari | 1 | 72 | 38 | 13 | Sigge | 80 | 16 | 15 |
| Volmari | 2 | 105 | 45 | 7 | Sune | 99 | 13 | 11 |
| Volmari | 3 | 197 | 29 | 17 | Sune | 128 | 31 | 11 |

SPANISH: recording

| | | | | | | | | |
|--------|---|----|----|----|-------|----|----|----|
| Raquel | 1 | 27 | 21 | 29 | Sune | 78 | 25 | 16 |
| Raquel | 2 | 68 | 14 | 10 | Sune | 78 | 53 | 6 |
| Raquel | 3 | 88 | 15 | 29 | Sune | 53 | 50 | 26 |
| Carlos | 1 | 65 | 26 | 27 | Sigge | 63 | 27 | 20 |

| | | | | | | | | |
|--------|---|-----|---|----|-------|-----|----|----|
| Carlos | 2 | 125 | 7 | 20 | Kalle | 152 | 46 | 9 |
| Carlos | 3 | 144 | 4 | 23 | Kalle | 140 | 50 | 12 |

SWEDISH:

| | | | | | | | | |
|------|--|-----|----|----|------|-----|----|----|
| Adam | | 164 | 22 | 9 | Sune | 162 | 26 | 6 |
| Eva | | 35 | 11 | 11 | Sune | 33 | 15 | 15 |

Table 2.

POST SCENE

LEARNER/CONTROL TURNS %YNM %REP TLS TURNS %YNM %REP

FINNISH: recording

| | | | | | | | | |
|-------|---|----|----|----|-------|----|----|----|
| Tarja | 1 | 19 | 31 | 21 | Sigge | 23 | 17 | 8 |
| Tarja | 2 | 10 | 20 | 10 | Sune | 11 | 0 | 9 |
| Tarja | 3 | 0 | 0 | 11 | Sune | 10 | 10 | 10 |

| | | | | | | | |
|----------|----|----|----|------|----|----|---|
| SWEDISH: | | | | | | | |
| Adam | 12 | 5 | 16 | Sune | 13 | 0 | 0 |
| Eva | 28 | 11 | 7 | Sune | 28 | 25 | 3 |

| | | | | | |
|---------------------|------|------|-----|------|------|
| LEARNER/ CONTROL | %YNM | %REP | TLS | %YNM | %REP |
|---------------------|------|------|-----|------|------|

CONVERSATION

| | | | | | |
|------------|------|------|--|------|------|
| FINNISH | 41 | 11 | | 19 | 10 |
| SPANISH | 14.5 | 23 | | 41.5 | 15 |
| SWEDISH | 16.5 | 10 | | 20.5 | 10.5 |
| POST SCENE | | | | | |
| FINNISH | 27.5 | 16 | | 8 | 13 |
| SPANISH | 19 | 24 | | 17 | 29 |
| SWEDISH | 8 | 11.5 | | 12.5 | 1.5 |

Table 3 should be read with caution, since the number of informants is not very high and there is some variation, which can be seen in tables 1 and 2, but it still shows some tendencies which seem quite stable.

Lexical repetition is used more by the Latinamerican language learners (in about 23% of the turns), and by Swedish target language speakers talking to Latin-American learners, than by the other groups, regardless of activity.

Finnish learners and Swedish controls use about the same amount of lexical repetitions in conversation (about 10%), while the Finnish learners use lexical repetitions more frequently in the post scene.

Simple yes/no/mm feedback, on the other hand, is used more by the Finnish learners than by the other groups.

The frequency of lexical repetition as well as simple yes/no/mm feedback in the target language speakers tends to increase in spoken interaction with the Latin-American learners, but stays about the same in interaction with the Finnish learners as with the Swedish controls.

We can, thus, say that simple YNM is a preferred learner strategy for Finnish learners, while for Latin-American speakers the preferred strategy is repetition. However, both Finnish and Latin-American learners increase the use of their "nonpreferred learner strategy" (for Finnish: repetition, for Latin-Americans: simple yes/no/mm feedback) in the post scene, compared with conversation.

The hypothesis that the amount of lexical repetition will increase in interaction involving language learners compared to interaction between two native speakers, is confirmed for the post scene, where the activity is very structured and places specific demands on the interactants. This holds for learners as well as TLS and points to a mutual convergence. The hypotheses can, however, not be confirmed independently of the activity type and the source language influence. This can be seen in the conversation, where the

The language learners show no general tendency to change the

relative amount of lexical repetition (or simple feedback) over time. One might, for example, expect that the Latin-American learners would adjust to the target language norms by reducing their use of repetition over time and that the Finnish learners would, in the same way, cut down their use of simple feedback but this is not the case in our data.

4.2. Type/token ratios

Table 4 shows the type/token ratios.

Table 4.

TYPE/TOKEN RATIOS FOR THE ACTIVITIES - BOTH SPEAKERS INCLUDED

LEARNER/CONTROL TYPES TOKENS TYPE/TOKEN RATIOS

| LEARNER/CONTROL TYPES | TOKENS | TYPE/TOKEN RATIOS | |
|-----------------------|--------|-------------------|------|
| ----- | | | |
| CONVERSATION | | | |
| ----- | | | |
| FINNISH: | | | |
| Tarja 1 | 175 | 440 | 0.40 |
| Tarja 2 | 152 | 342 | 0.44 |
| Tarja 3 | 165 | 432 | 0.38 |
| Volmari 1 | 261 | 752 | 0.35 |
| Volmari 2 | 333 | 1207 | 0.28 |
| Volmari 3 | 414 | 1395 | 0.30 |
| SPANISH: | | | |
| Raquel 1 | 329 | 1036 | 0.32 |
| Raquel 2 | 202 | 628 | 0.32 |
| Raquel 3 | 319 | 1203 | 0.27 |
| Carlos 1 | 100 | 244 | 0.29 |
| Carlos 2 | 417 | 1854 | 0.22 |
| Carlos 3 | 385 | 2105 | 0.18 |
| SWEDISH: | | | |
| Adam | 313 | 1058 | 0.30 |
| Eva | 202 | 498 | 0.41 |

The type/token ratios do not give much additional information about lexical repetition. It is obvious from the table above that the type/token ratio is intimately related to the number of words that are produced, so that many words give a low type/token ratio, as one might expect. It is, however, interesting to note that the relations seem to be the same in the learner interactions as in the native speaker interactions, so that it can not be said that word form repetitions, including YNM and other function words, per se, are more frequent in learner - TLS interactions than in other interactions. It is, however, interesting to note that for all speakers the type/token ratio is lower in the conversation than in the post scene, which means that lexical convergence is higher in conversation. But, since YNM and other function words are included in the numbers, it does not necessarily say anything about an increased amount of repetition or the type we are interested in.

are involved. Especially we want to see if the hypothesized functions in section 2.3. above are found.

Interindividual lexical repetition in the interaction of two L1 speakers of Swedish seem to have four main functions. These functions of lexical repetition are also very frequent in the learner - TLS interactions. We can call them L1-functions.

They are the following four functions (examples are given with translations in brackets and repeated items are underlined):

1) TO GIVE AN AFFIRMATIVE ANSWER TO A YES/NO-QUESTION OR POSITIVE FEEDBACK TO A STATEMENT

Example:

a: nej de + håller dom tyst om ju

t: de håller dom tyst om ja

(a:-no that + they keep quiet about

t: they keep quiet about that yes)

2) TO ANSWER A DISJUNCTIVE QUESTION

Example:

s: ?vill du skicka me flyg eller båt?

e: ja tar de me båt

(s: ? do you want to send by air or boat?

e: I take it with boat)

3) TO GIVE QUESTIONING FEEDBACK (ECHO-QUESTION)

Example:

a: ah S lite grann

t: ?lite grann?

(a: ah and a little

t: ?a little?)

4) TO PICK OUT A CENTRAL WORD OR EXPRESSION TO COMMENT ON OR TO ESTABLISH UNDERSTANDING

Example:

a: ja de ä ju två skift så de ä ungefär + ja tre tusen på varje skift

t: tre tusen på varje skift + de e många

(a:yes there are-two shifts so there are about + yes three thousand on each shift

t: three thousand on each shift + that's a lot)

Repetitions having these functions are also used in the language learner - TLS interactions, most frequently by the Latin-American learners, especially in conversation. Repetition of a "central word" to start a comment is not used at all by the Finnish learners.

that are put to him, having very little active Swedish himself (cf example below).

All the other hypothesized language acquisition relevant functions of lexical repetitions are also found in the data. They are discussed and exemplified below. The hypotheses (cf section 2.3. above) have the form of pairs of the same, similar or complementary functions of learner and target language speaker repetitions. Learners and target language speakers are therefore treated together in the discussion.

Functions of learner and target languagespeaker r repetitions, i.e. -L-TLS functions;

1) REPETITION OF KEY WORDS THAT ARE UNDERSTOOD are found in all the learners and in a few of the target language speakers. They occur in conversation as well as post scene.

2) REPETITION OF WORDS THAT ARE NOT UNDERSTOOD, in order to get some kind of clarification, is used by all the learners and all the target language speakers.

Example: s: jaa + hä här har du varit förut
r: ?förut? <pause>
s: hä här har du varit tidigare
(s: yes + he here you have been before
r: ?before? <pause>
s: he here you have been earlier)

This is probably a repetition of a non-understood word. At least this is how it is interpreted by the target language speaker, since he changes förut to tidigare.

3) LEARNER REPETITION OF WORDS IN ORDER OF TRY THEM OUT AND/OR BE CORRECTED is found mostly in the speech of the Latin-American learners and only in a few cases in Finnish learners (cf also 4 below).

Example: s: de blir bättre å bättre
r: bä bättre bättre inte
(s: it gets better and better
r: be better better not)

Here the learner might be trying to use the TLS expression "bättre å bättre".

TARGET LANGUAGE SPEAKER REPETITION OF WORDS THAT HE/SHE WANTS TO CORRECT are quite frequent in interactions with all the learners.

Example: r: ... ja går till eh + bad badsimma
s: jaha + badhuset

repetitions of new words without any accompanying question, like "is it called xxx?" or questioning intonation can be considered under this category.

Example: k: ... va har hänt me dej + under den här tiden
c: ... de ä inte så inte nån särskild sak jag gjorde under den tiden
(k: what has happened to you + during this time
c: it is not so not any particular thing I did during the time)

TARGET LANGUAGE SPEAKER REPETITION OF WORDS THAT THE LEARNER HAS ALREADY USED IN THE CONVERSATION, in order to keep the communication smooth, can be noticed in that the target language speakers tend to keep to the same verbs that have been used before, often verbs that are high in frequency, for example "gå", "åka", "jobba" (= "go", "travel", "work"), or specific verbs that the learner has introduced, like terms for different kinds of work in a factory. The target language speakers generally avoid introducing infrequent words.

5) REPETITION OF IMPORTANT WORDS IN ORDER TO CONFIRM UNDERSTANDING is a function that overlaps with category 4 of the categories listed above for interactions between L1 speakers of Swedish (the L1 categories). It is used by all the speakers, although less frequently in interactions with Finnish learners than in interactions with Latin-American learners.

The most interesting patterns of lexical repetitions are found in the conversations with Volmari (Finnish learner) and with Raquel and Carlos (Latin-American learners).

Volmari has a very limited target language vocabulary, but keeps the conversation going partly by systematically using words from the target language speaker's question for his answer. Since he does not initiate any topics himself, this use of repetition, in combination with the use of simple feedback and a limited active vocabulary, works quite well.

Example:
s: ?tittar du på teve eller läser du eller?
v: ja ja tittar på teve mycket å läser lite
(s: ?do you watch TV or do you read or?
v: yes I watch TV much and read little)

Raquel and Carlos both try creative translations and use of L1 words and often get a chance to learn new words when their attempts are translated or corrected by the target language speaker.

Examples:
r: ... ja hade eh grönsak affär affär grönsaksaffär +
s: grönsaksaffär ja
(r: ... I had eh vegetable shop shop vegetableshop +
s: vegetableshop yes <= greengrocer's shop>)
r: ... + heter illimani montana montana

Example:

s: ?har du varit i borås redan? + ?har du sett borås?

c: eh + borås eh + borås ä gammal eh borås mm ++ tycker om tycker om tycker om borås

(s: ?have you been to borås already? + ?have you seen borås?)

c: eh + borås eh + borås is old eh borås mm ++ like like like borås

5. Conclusions

In relation to our hypotheses in section 2 above, our data point to the following tendencies:

1) Convergence, in the form of lexical repetition, does appear in spoken interaction between L1 speakers as well as in learner - target language speaker interaction.

2) Difficulties in understanding seem to increase the amount of repetition. This can be seen in the native speaker interactions, where some repetitions have the function of clearing out understanding problems and it is even more clear in the learner interactions. (The functions involved in this are the L1 functions 3 and 4 and the L-TLS functions I and 2.)

3) The hypothesis that a need for language learning would further increase the amount of lexical repetitions finds support, for the types of repetition that we are mainly studying, in a comparison of the "post scene" and "conversation" data (see table 3 above). Note that this comparison gives the opposite tendency, when we look at the total type/token ratio. This is probably so because the great number of recurrent, very frequent function words (yes, no, mm, and, is etc.) are more frequent in conversation and "hide" the lexical repetitions of nouns, verbs, adjectives and phrases containing words of these classes. Since the post scene is a more structured activity than conversation, with specific demands on the use and understanding of certain words and expressions, it is also a situation where a need for language learning shows up. This brings out a higher percentage of the types of lexical repetitions that we are interested in, from both learners and target language speakers than we find in the conversations. This difference between the activities is not found in the L1 speaker interactions, which can be seen as support of the ideas that the post scene is more demanding and that repetition is a way to cope with this demand. Thus, language learning by repetition (i.e. imitation), which has been a long favoured idea in language teaching, also seems to have some kind of spontaneous counterpart in spoken interaction with learners.

All the L1 functions of repetition appear also in learner - target language speaker interactions and all four of them could potentially be instrumental in language acquisition.

All the additional hypothesized learner - target language speaker functions (L-TLS-functions) were also found in the learner activities. This means that there is a richer variety of functions of repetition in L-TLS interaction than in

- a) the influence of target language norms, an influence which is shown by the differences in the -use of lexical repetition between Latin-American and Finnish learners
- b) the need for language learning, which seems to vary both with individual and activity -as -evidenced in the differences between the amount of lexical repetitions in L1 speaker interactions and learner interactions in the post scene
- c) the type of activity, where a more structured and linguistically specified activity, like the post scene, increases the amount of lexical repetition for learners and target language speakers alike, while conversation seems to be more sensitive to other influences, like LI-influence.

The data show that language learners have an interesting tendency to spontaneously strengthen certain L1 functions in order to acquire L2 in spoken interaction. This can be seen in the Finnish learners' preference for using simple yes/no/mm feedback and the Latin-American Spanish speakers' preference for using lexical repetitions, tendencies which are both carried over from L1 to L2. Note, however, that both learner strategies are used by both groups.

Footnotes

1) This study is part of the ESF project on Second Language Acquisition "EALA". We wish to thank the members of the Göteborg team as well as participants in the Ninth Scandinavian Conference of Linguistics who have discussed the data with us.

References

- Allwood, J. 1976. Linguistic communication as action and cooperation. Gothenburg Monographs in Linguistics 2. Dept. of Linguistics, Univ. of Göteborg.
- Allwood, J. 1980. Power and communication. In Allwood, J. & Ljung, M. (eds.) 1980: ALVAR -en festskrift till Alvar Ellegård. SPELL 1. Dept. of English, Univ. of Stockholm.
- Brenner, S.-O. & Hjelmquist, E. 1977. Språkets psykologi. AWE/Gebers: Stockholm
- Giles, H. & Smith, Ph. 1979: Accommodation theory: Optimal levels of convergence. In Giles, H. & St. Clair, R. (eds.) 1979: Language and social psychology. Blackwell: Oxford.
- Tannen, D. 1981. New York Jewish conversational style. International Journal of the sociology of language 30. pp. 133
- Trevarthyn, C. 1977. Descriptive analysis of infant communicative behaviour. In Schaffer, H. R. (ed.) 1977: Studies in mother-infant interaction.