LINEARIZATION STRATEGIES IN EFL WRITING: SOME OBSERVATIONS

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INTRODUCTION

Studies in second language (L2) written discourse production have consistently adopted theoretical and experimental models developed to describe the same phenomenon in the writer´s first language (L1) -basically those developed by Flower and Hayes (1981), de Beaugrande (1984), and Scardamalia & Bereiter (1987). The rationale for this line of inquiry is that it has seemed intuitively sound to examine the knowledge structures and cognitive processes involved in text production regardless of specific linguistic systems and then to apply the results to L2 research. However, by its very nature of being L1 based, this approach entails an important drawback when one is trying to look at the real processes of writing in a foreign language (FL). It is related to the little attention, perhaps with the only exception of de Beaugrande (1984), these models pay to the linearization process (also known as "translation" or "transcription") in comparison to the enormous attention paid to the other macroprocesses, namely planning and revision (Scardamalia & Bereiter, 1986; Piolat et Roussy, 1992). This is unfortunate because it may be reasonable to speculate that FL writers, due to their lack of proficiency in the target language, must devote an enormous amount of their resources to putting their ideas in linear form. Consequently, it seems essential that attention should be focussed on this process if one wants to do justice to their concerns as L2 writers. A similar point has been made by other researchers when analyzing the validity and adequacy of L1 writing models to account for L2 writing: "while L1 production models are descriptively adequate when applied to SL writing research, it seems however necessary to adapt them to include the processing constraints of the L2 on the set of writing strategies already manipulated by the writer in L1" Whalen (1993: 612).

The intent in this article is to present some results of a study which has made use of think-aloud protocols to explore L2 composing behaviours with the purpose of exploring how the task of putting ideas in linear form is accomplished by the typical foreign language writer. In that respect, I am more concerned here with describing a construct than with testing that construct systematically. To that end, an analysis was performed of ten think-aloud protocols that ten intermediate Spanish learners of EFL, at Murcia University Teacher Training School, carried out when doing a composition in English. The title of the composition was taken from Raimes (1987) and ran as follows: "Success in education is influenced more by the student´s home life and training as a child than by the quality of the tea-

ching and the effectiveness of the educational program. Do you agree or disgree?". It was expected that the topic, educational in nature, would presumably raise the students´ interest for the writing task, a factor judged to be decisive in the writer´s degree of involment.

THE NOTION OF LINEARIZATION

It seems intuitively obvious that the phase in which FL writing may largely reveal its own specificity as against L1 writing is that in which the writer tries to translate an idea, which may be organized in a complex network of relationships, into a linear piece of written English. If we follow de Beaugrande's model (1984) in that the writing task consists of a series of phases that interact in parallel fashion, it is easy to see that the key point at this stage is how to conjugate the hierarchically organized options produced by the deeper phases of text processing with the concerns of syntax and inscription. Thus, this model goes, the goal-planning phase sets up pathways of actions that might lead to a goal. The ideation phase creates the main topics that act as control centers, which, in turn, are enriched, elaborated and interrelated by the conceptual development phase and are assigned natural language expressions by the expression phase. But these phases do not direcly produce the linearity of the text. They only include sets of options arranged in non-linear fashion which must now conform to the constraints of linear sequencing. This complex meeting space of the higher and lower levels is what constitutes the substance of the transcription, translation or linearization process, and manifests itself through the given-new progression of the text (see fig. 1).

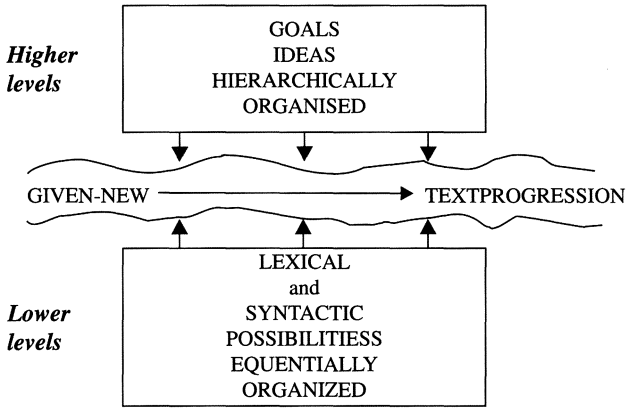

Figure 1: The notion of linearization

Essential to this progression is the introduction of new information, which basically entails the problem of segmenting it into clause blocks or units and then relating them to each other (Fayol, 1991). The processes involved, as any other processes related to writing, are not simple and do not normally occur in linear fashion but recursively. Flower and Hayes (1981) claim that these processes tend to be so demanding at times that may even overwhelm the immature writer since they involve the holding in short term memory of a host of demands which, as mentioned above, range from the most ideational and generic to the more

lexical and syntactic. In that respect, they coincide with those investigators of the composition process who have narrowed their concern with language production to the study of its possible interference with other processes in their competition for mental resources (Perl, 1979; Scardamalia et al. 1982). Findings indicate that, as compared to immature writers, expert writers are at an advantage for a number of reasons. They have automatized procedures for spelling and punctuation, have control structures that allow them to move back and forth between higher and lower demands and have at their disposal a repertoire of linguistic alternatives that can be put to use when required (this last probably not being the case with most EFL writers).

In order to operationalize these processes, and for want of a better name, I have decided to borrow the notion of scaffolding (here, self-sustained scaffolding) from cooperative discourse studies (Hatch, 1983) since it can easily be noticed in the think-aloud protocols that, most of the times, subjects progress through the text in a way more or less reminiscent of the way conversation was reported to progress there. Thus, *self-sustained scaffolding* may be taken to consist of all forward and backward actions the writer accomplishes in order to complete a particular stretch of text. This operational construct can be accounted for, at least, from two theoretical sources. The first one, general in nature, refers to the constructivist conception of intellectual behaviour. As opposed to reflectory behaviour, which refers to a fixed connection between a stimulus and a response, constructivists like Leontiev (Leontiev, 1975, in Faerch and Kasper, 1983: 22-23) hold that when the individual behaves intellectually he has to choose among alternative responses to a given stimulus by constructing "models of the future" on the basis of "models of the past and the present". The second source, more to specific to composing, is de Beaugrande's (1984) look-back and look-ahead principles of linearization, which are supposed to gauge how progress is made through the text. The look-back principle subsumes all the activities in which processing is influenced or controlled by previous activities in the text. It is a way to express the fact that current decisions and choice of future alternatives are continully being constrained by those already adopted. The look-ahead principle is the complement of the former and subsumes all activities directed to subsequent parts of the discourse. An important difference between both principles is that, although goals and main ideas can be anticipated well in advance, detailed concepts, phrasings and actual words can be planned only a little ahead of time and sound or letters only an instant before the actual production. Look-ahead operations are, therefore, taken to be more sensitive to heavy processing loads and it can be assumed that most problems in linearization will come about when the writer is moving forward through the text. It is easier to make the current decision fit previous recorded ones than subsequent anticipated ones, specially when the former are more easily accessible in terms of perceptual saliency (visible text), familiarity, easier obtention of feedback and more possibilities of focussing attention on few specific problems rather than dilluting it over a great many.

With these notions in mind, the decision has been taken to analyze the protocols through three types of verbalizations: a) verbalizations of the actual text actually written down; b) verbalizations of the subjects about their writing, that is, any words uttered above and beyond the words actually written down; c) verbalizations of rereadings and repetitions of text already produced. The first type of verbalizations is taken to be the basis the other two types hinge upon. The second type is supposed to account for the problems the writer

encounters when trying to move forward through the text and the third type is supposed to cover the actions he accomplishes when looking back as a springboard for transcription (not for revision, for example).

LINEARIZATION STRATEGIES

The analysis of these verbalizations has yielded a number of empirical regularities, in the form of strategies. The notion of writing strategy appears closely linked in the literature to the conception of writing as a *complex problem-solving process* whereby the writer manipulates a series of interrelated cognitive processes (planning, evaluation, revision, transcription, etc.) to achieve the goals that he sets for himself. This perspective, in turn, fits in with the tradition of problem-solving models initiated by Newell and Simon (1972) whose basic tenet is that the "fundamental organizational unit of all human human goal-oriented activity is the problem space" (Newell, 1980: 696), which is conceived of as a set of representations or knowledge states and a set of mental operations that can be applied to change one state or representation into another. Mental representations in composition range from those related to content and lexis to those of syntatical structure, discourse, and rhetorical nature, all of which may give rise to a wide variety of problem spaces. The mental operations applied on those representations constitute what is known as *composition strategies,* which so conceived, can be defined as integrated sets of procedures, of variable length, selected with a particular goal, which varies in consonance with the mental representation involved- and designed to optimize performance (Fayol, 1994: 181). Obviously, this implies that the writer must have acquired a certain number of procedures from which he can choose the most appropriate according to the goal being pursued, the task constraints, knowledge of his/her capabilities, etc.

The strategies our subjects use in transcribing their ideas will be presented below together with examples taken from the data. In doing so, I will also discuss some theoretical ideas that may help interpret those strategic behaviours in the hope that their contrast will produce some useful lines of inquiry to be pursued in future studies.

A. Verbalizations of the text written down

This first type of verbalizations has thrown up a type of information which is essential at the beginning of the analysis: a) whether the linearization process occurs smoothly and fluently or b) whether it is interrupted by problems and/or backward movements, an indication that some kind of self-sustained scaffolding is taking place.

Example of a smooth and fluent linearization process (from now on, underlined words are those actually being written down):

> *"..this is a com-pli-ca-te* (4) a complicate and *and and..difficult fact for teachers* (9) *some years ago..teacher was seen as a important..* important (3) *grade or person who represented the culture the education and also the hunger.."* (Juan Fra, 2, l. 60-64).

The process of scaffolding can be simple:

> (writing) ".. *the teacher*.. the teacher *is very important*.. the teacher is the teacher is very important.....the teacher is very important..important ..*in education*..because.." (Castillo, 2, l. 53-54)

Quite often, however, it is not so simple as it generally occurs with a number of problems and rereadings or repetitions embedded:

> "..*if you have* if you have *a family*..if you have a family.....if you have a family ..if you have....if you have a family ..*that ever....is talking* ever is talking with their children about studies..no about her life about the school (problem: to get a word that satisfies the intended meaning; search strategy: generation and assessment of alternatives) the school and *the problem*..the problems (problem: number; resolution: inmediate, no search needed) ..the problems *that they have*.." (Castillo, 2, l. 18-21)

B. Verbalizations above and beyond the written text

The analysis of this type of verbalizations has rendered a number of problem-solving behaviours that have been classified according to a modified version of the system proposed by Cumming (1989). Two main dimensions have been considered: a) the aspects of writing the writer is supposed to be attending to while facing the problem; b) the way the problem is approached (see fig. 2).

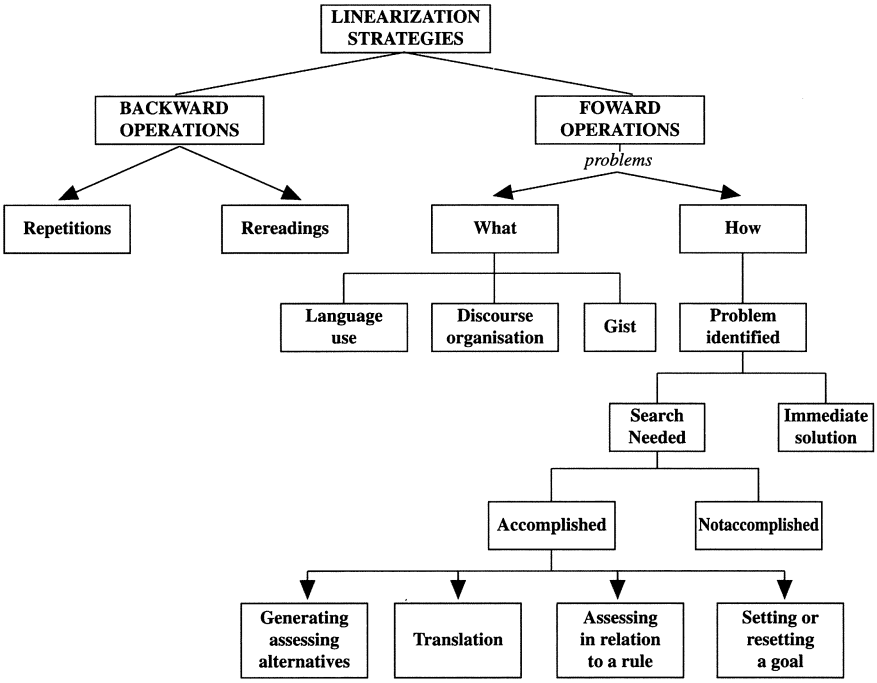

Figure 2: Linearization stategies

The first dimension, that is, what aspects of writing are being attended to, has been taken from Scardamalia & Paris (1985) and comprises five aspects subjects may focus their attention on while writing: language use, discourse organization, gist, intention, and procedures for writing. After careful examination of the data in the light of these categories, I decided to do without intentions and procedures since they hardly occurred. Consequently, the analysis has been focussed on the remaining three.

Language use indicates that subjects are paying attention to their use of English as a linguistic code; the statements under this category refer to morphosyntactical aspects, lexis, punctuation or spelling. Example:

> "..however I´m I´m agree erm ..I´m agree no I´m agree no es I agree I agree I agree with mm..with the ..other other point of view.." (Moya, 2, l. 192-193)

Discourse organization covers the fact that attention is being paid to the organization of the discourse structure beyond the level of the clause; reference is made to organizational units, i.e., paragraphs, introductions, examples, points and so on. Examples:

> "... ah bueno claro y pongo un ejemplo de lo raro entonces ahora puedo hablar de lo que no es tan raro o sea in this way..(I´ve just put an example of what is taken to be weird and now I can put another one of what is nor so weird)" (Fernández, 2,l. 111-112).

> "...bueno ya tengo más o menos la introducción..ahora vamos a ver en qué me baso yo para decir que está..que se encuentra influída por las dos cosas..(OK I´ve put more or less the introduction ..now..let´s see on what I can base myself to say that it is influenced by both things)" (Botía, 2, l.)

Gist refers to the writer's thoughts and ideas; the segments covered by this category indicate that subjects are formulating, considering, reconsidering or searching for content in their writing. Example:

> "..voy a poner eso de que ..a ver de que el mundo del crío de que cuando eres un niño el único sitio por donde te mueves se tu casa porque todavía no has empezado a salir con una pandilla ¿no? como ya es un adolescente.." (I´m going to put that..let´s see the fact that the child´s world the fact that when you are a child the only place you move about is your home since you haven´t started to go out with a group of friends, have you? as it happens when you become a teenager (Moya, 2, l. 26-29).

Sometimes subjects appear to be paying attention to a combination of these aspects simultaneously. This is an important point because it is an indication of the complexity of their mental representations. Example of a gist plus language use combination:

> "..¿cómo se ponía eso? (how could I put that?) ah sí..era (it was) hand ..¿cómo era? (what was it like?) oyy por Dios (oh, my God)..one hand a one hand creo (that´s right) que era así (I think it was like that)..one hand boy handed boy eso one handed boy.." (Fernández, 2,l. 160-162)

From the point of view of how subjects approach the linearization problems they pose for themselves, three different types of behaviours have been identified:

1. Problem identification; no search or compensatory action needed.

This category covers those segments in which subjects identify a problem and immediately resolve it without resorting to any heuristic search. It appears that, in these cases, the recognition of a problem entails its immediate resolution.

> "...they prefer go to play with her friends..that study..his their their bored subjects of school.." (Castillo, 2, l. 145-146).

> "...(rereading) one thing is educational program and another are the teacher..is educational program..one thing one thing is educational program and and another..are the teachers? *another are the teachers..*" (Castillo, 2, l.117-120).

> "...If they are bad teachers he they..quito el (I´ll remove "the") he..they can do that a child hate his subject.." (Castillo, 2, l. 134-135).

Further analysis of the data is required to ascertain a number of aspects related to this recognition-automatic resolution pairs: a) the range of problems in which these pairs occur as it may well be the case that they occur only in lower-level problems basically related to language use; b) whether those problems could be regarded as well-defined or ill-defined problems.

2. Problem identification; search or compensatory action needed but not accomplished.

In this category are included all those segments in which subjects detect a problem but they do not attempt to resolve it.

> "...yo no tendría tanta..(I would not have so much) um..(3) nada me atasco y nada es que me atasco con una palabra y no y no y no..(no way I get blocked I get blocked with a word and there´s no way out) (rereading) if I were in this situation..nada no me sale.(no way).." (Fernández, 2, l. 229-231).

The protocols indicate that, at times, the problem has been identified to be approached later. It seems that this procedure gives the subject the possibility of keeping on with the "dominant" operation (de Beaugrande, 1984) being attended to in that precise moment without being unnecessarily disturbed. It follows that, on these occasions, this behaviour implies further revision and, as such, serves a strategic function.

> "... during all.. the life..durante toda la vida..lo que no sé es si se pone aquí the (I´m not sure if I should include "the" here)..bueno lo subrayo y luego lo miro (allright I´ll underline it and have a look at it later on)..durante toda la vida.." (Botía, 2,l.)

> "... a ver qué más puedo poner ahora puedo poner el ejemplo si se me ocurre alguno un ejemplo así que..(let´s see what else I could put now I can put the example if it comes to my mind) um.um..(4) no sé un ejemplo a lo mejor famoso o algo pero es que ahora mismo no sé (I don´t know perhaps a famous example or something like that but the thing is that right now I don´t know)..bueno voy a poner aquí example e igual se me ocurre ahora si no pues no lo pongo (allright I´ll put example here as it might well occur to me right now if not I won´t put it).." (Fernández, 2, l. 96-100).

Further analysis must reveal the course of action taken by the writer as a follow-up to this type of behaviour: message abandonment, message replacement, and so on. For this, a careful analysis of the problem space that the writer represents for himself is essential.

3. Problem identification; search or compensatory action needed and accomplished.

Subjects identify a problem and then initiate a strategic search in order to solve it. In the problem-solving literature this type of procedure is known as heuristic, which is defined as "the reduction of the space of possibilities one must search through by taking advantage of partial knowledge of what one is looking for" (Scardamalia & Bereiter, 1986: 785). The following heuristics have been identified:

3.1. Generating and assessing alternatives. Involve the production of different items or units and the evaluation of their appropriateness, qualities or desirability. Example:

> "...on the other side or on the other hand?..on the other side? or on the other hand?..on the other side ..on the other side está mal..on the other hand..on the other hand on the other side..on the other side ..on the other side (she takes it for good) on the other side.." (Castillo, 2, l. 172-175).

The most common search found in the protocols is that for acceptable grammatical forms and appropriate lexical items that would best express the writers´ intention (which may be already clear to them in L1). In the vast majority of these segments, subjects seem to be paying attention to gist and language use in conjuction.

The search may be simple with few elements involved:

> ".. speak creo que es con (I think it is with) speak hablar contigo yo creo que es speak to..speak with no me suena (doesn´t ring a bell)..that speak to you voy a poner to me parece que es to..(I´ll put to I think is to" (Moya, 2, l. 44-46).

> "...but when a child starts school other opinions..um..otras opiniones y..vamos a ver..y qué (4) no sé (3) bueno mira other opinions no other people um influence him.." (Fernández, 2, l. 51-53).

Or it may encompass a rather complex operation with multiple elements intervening (the following example has been taken from a protocol where the subject is struggling for an opening sentence of her composition):

> "...(the writer has just generated a series of ideas in L1 and is now approaching the problem of writing them in L2) a ver cómo digo yo esto (let´s see how I can put this) (3) ..is scientific no ..it has been proved..bueno (well) it has been proved no..one no ..one of the..one of the..one of the..one (3) there are well erm there are there are three agents in the community which are which are the..pero es que (but the thing is that)..one of the principal one of the principal educat educational..agents..in a ..en el..ah.. the man..the man (3) the man has..the man has..or is influenced or (3) the man during his during his..during his life has differents educational agents which are the family the school and the society or the community (3) oichh no sé cómo decirlo vamos a ver (I don´t know how to put it let´s see) ..voy a empezar así..there are three

important there are..in the in a in the life there are three important educational agents in the life of the man..in of in the life of a man which are the..*the principal the principal educational agents which which influ which..which which influ in the training and the education..of a child..are..*vamos a ver (let´s see) the principal..of a man has erm..three erm..of a man is..a child a child can be a child can be..can be can be trained..no me gusta..voy a empezar así (I don´t like it..I´ll start this way) *the principals..*" (Alicia, 2, l. 40-64).

Similar patterns of behaviour have been reported by different researchers. Raimes (1985, 87), for instance, proposed a specific category to account for the observed fact that some of her subjects spent long periods of time searching for acceptable grammatical forms and appropriate lexical items to express their intended message. Urzúa (1987), similarly, reported increasing attention to word choice as one of the defining characteristics of developing ESL literacy among the children she studied. These patterns in L2 writing resemble some repair sequences reported in the literature on L2 learning through the negotiation of meaning in conversational interactions (Long, 1983). If these oral production mechanisms have some potential value for L2 learning, it would be legitimate to hypothesize that so will the written production ones.

A line of inquiry which could be used in this domain is that related to communication strategies, but a note of caution is in order here. Unlike most tasks used in that type of research where the intended referent is normally known in advanced by the subject, the writing task is primarily characterized as a scenario where the intended meaning is constructed by the writer as an ongoing process. Writing, from this perspective, is the process of exploring one's thoughts and learning from the act of writing itself what these thoughts are. Rather than being the development of some preconceived and well-formed idea, writing is the record of an idea developing. This does not mean, however, that nothing can be drawn from the communication strategies field but it is something that must be ascertained in the future.

An interesting theoretical problem in this context, as in almost all psycholinguistic studies where sentence production processes are involved, is which are selected first, phrases or words. Different studies (see de Beaugrande, 1984: 116) seem to suggest that both priorities are possible. Perhaps the most plausible solution to the conflict is to postulate that both phases, word choice and syntactic format, run in paralell and that one is activated prior to the other depending on when the materials (items or structures) are found and made ready for execution. It remains to be seen if this hypothesis is confirmed in L2 writing. Some available evidence in L2 speaking studies (Lennon, 1984) confirms Fathman's (1980) findings in the sense that topic and syntax are planned in advance of word choice among second language learners. Jones (1985), on the contrary, claims that, at least among monitor overusers, the opposite is the case.

3. 2. Translating. As opposed to the abovementioned idea of translation as synonymous with transcription or linearization, translation is used here as a heuristic which involves the mental reprocessing of L1 words, phrases, sentences or strings beyond sentences to produce written texts in L2. This strategy is quite frequent in the protocols and, as in the one repor-

ted above, subjects seem to be paying attention to gist and language use simultaneously when operating with it.

One its recurring patterns is: element not found in L2- search in L1- translation into L2:

> "...an example to..a seguir (to follow) an example to..es que no es..bueno voy a poner (well I´ll put) to keep pero es que no es to keep..to go on.. no sé si será..to keep o to go on..no sé.." (Fernández, 2, l. 66-67).

> "...ellos han desarrollado ..um ..sus mejores cualidades (they have developed their best qualities) without the help..no sé si es así (I don´t know if it is like this)..helping..no sé si se podrá decir (I don´t know if you can say that)..um..without um..without..his parents'..um..no sé es que no se me ocurre (I don´t know the word doesn´t come to my mind).. ayuda help ¿cómo era cómo era ayuda? (What was the English for "help"?)..ay madre (Oh¡ my god)..sus padres ..parents..um..ayuda no..influencia tampoco (neither help nor influence)..apoyo (support)..*support their parents' support..*" (Fernández, 2, l. 83-87).

The same pattern can occur with phrases, which are then translated piecemeal into the L2:

> ".. two factors which sean (5) influen..influen influ influ los cuales tengan influencia have influence in their education.." (Matas, 2, l. 30-32)

Sometimes, however, the search ends and the problem is not resolved or its solution is to be delayed:

> "...(4) erm *the way* ..way *in which..parents* (3) erm educan *educate* erm her chi his chil ..es que their *their children..*(3) their children erm contribuye *con-tri-bu-tes* to erm a ver (rereads in L1) la manera o el modo en que los padres educan a sus hijos contribuye a (the way parents bring their children up contributes to)..¿cómo lo diría yo? (how could I put this?) (3) a ver (let´s see) contribuye a..a formarlos como personas (to shape their character)..contributes to to to to ¿cómo lo pongo? a ver (how can I put this? let´s see) (rereading in L1) el modo en que los padres ayudan a sus hijos contribuye a (3) a crear (to create) no a..a que lleguen a ser (to get them become)..a que lleguen a formar una personalidad (to get them shape their own personality)..to to to to a ver (let´s see) a llegar a hacer de ellos (to make from them) (3) ah¡ contribuye a orientars ori-en-tar no sé como se pone pues pongo orientar y lo subrayo (I don´t know how to put "to guide" so I´ll put orientarse and I´ll underline it)..." (Botía, 2, l.)

Confirming Krings (1987) and Cumming's (1990) findings, there is a tendency among some subjects to backtranslate, that is to translate an English word or phrase just produced back into their L1 as a way of assuring themselves that they are on the right track. This phenomenon appears to occur sometimes spontaneously when they are transcribing and it seems to help them sustain their train of thought:

> "..(the writer is writing the sentence) *well teaching at school* (4) la enseñanza en la escuela (backtranslation) se encuentra está (new inf. in L1) en (4) ¿cómo se diría?

(how can I put this?) bueno is focussed (new inf. in L2) está enfocada (backtranslation)..*to all and every pupil* (new inf. in L2).." (Juan Fra, 2, l.37-40).

Although not reported in the abovementioned studies, in cases like the one above, backtranslation does not merely amount to a verification of the text previously written down or generated in L2 but also serves to add new information which acts as a trigger to be completed in L2. Normally, the sequence of steps is as follows: string written in L2 --) backtranslation + new information in L1--) translation into L2 + new information in L2, etc. Another example along the same lines:

".. (the subject is writing the sentence) they can't ellos no pueden ocuparse they can't *take care about their* children educ *children's education..*" (Matas, 2, l. 64- 66

From an information-processing perspective, there are a number of functional benefits that derive from translation. It facilitates semantic processing and permits consolidation of meaning that would otherwise remain fragmented if represented in L2 form, that is, it appears to serve to maintain concentration long enough for meaning to be integrated and assimilated. On some occasions, specially if the sentence gets too long, the subject's concentration in L2 may be affected through lack of automaticity in word retrieval as well as memory span limitations. On the contrary, producing segments in L1 generally proceeds rather smoothly because writers can, among other things: a) retrieve many words and chunks (sets of propositions) automatively; b) unfold or "unchunk" those macroestructures syntactically in strings (sentences or phrases), since their syntactic valencies are also automatically retrieved in such a way that working memory spans are not exceeded. The result is that, once that a segment of text has been generated in L1, the writer´s production processes can, at least, in the first instance, proceed much as they do in the L1, unimpeded by much semantic and integrative processing. In other words, the L1 may allow the writer to establish a "mental scratch-pad , or semantic buffer, where phrase-level and discourse-level meanings can be represented and assembled in the L1" (Kern, 1994: 449).

An important question to be answered is under what conditions FL writers translate. Our protocols reveal that in most cases they do it intermittently, as a way of responding to difficulties. As such, it is a way of paying attention to small details and represents a switch from automatic to controlled processes (McLeod, McLaughlin, 1983) or from procedulized to declarative (Dechert, 1986). There are also some instances of continous translation, as a sort of long term approach to L2 text production. This distinction may correspond to Dornic´s (1979) "deliberate" and "unintentional and unconscious" translation. Further analysis should make clear the factors which appear to influence the writer's decision to translate one way or the other: proficiency in L2, syntactic complexity, semantic complexity, personal style, etc.

3.3. Assessing in relation to a rule or reasoning about linguistic choices. These segments indicate that subjects make explicit use of their knowledge of the linguistic rules of the L2 as a guide for their decisions. The few examples found of this type of behaviour show that the writer is paying attention to language use only, not language use plus gist like in the two previous heuristics:

"...(4) otra cosa que hay que tener en cuenta (another point to be considered) ..*other* point..no other no another another es para singular *another point* (deletes other) (3) *which sometimes* (3) influye influence *influences* es con -s porque es tercera persona (with an -s because it is the third person singular).." (Botía, 2,l.)

This type of behaviour opens up the possibility for the researcher to get deep into the idiosyncratic rules subjects construct for themselves and thus provides a way to look into their interlanguage, not by way of a grammaticality judgement but in the course of a larger piece of discourse learners themselves are in the process of creating. In fact, these segments reveal that subjects are testing their hypotheses (Bley- Vroman, 1986, Ellis, 1986) in a self contained way, independently of any external input or feedback. The point here is that learners make use of their analyzed knowledge of the L2 to compensate for their lack of control as a mean of going about production (see Mc Laughlin, 1987, for an elaboration of this idea).

3. 3. Setting or resetting a goal. It involves the choice or reconsideration of a particular objective to guide decision making in achieving a particular objective. Although it may be argued that this strategy is more linked to planning than to transcribing, the data reveal that it may be also thought of a guide for the transcription of a upcoming stretch of text, acting as a "control center" (de Beaugrande, 1984).

"...quiero poner ahora quiero poner que..desde mi punto de vista o sea que que estudio magisterio y no puedo solamente decir esto porque..o sea yo tengo que decir que tengo esperanza que el sistema de educación contribuya a cambiar a alumnos como éstos (I´d like to say now that I´m studying to become a teacher and I can´t only say this ..that is I have to say that I expect that the educational system lend itself to changing pupils like these).." (Fernández, 2,l. 121-124).

The ideas generated in the example constitute the core of the message the subject wants to convey. It can be said that the conceptual development it may give rise to and the transcription procedures it may triggers only make sense from this starting point.

C. Verbalizations of the text already produced

This third type of verbalizations reveal, as indicated above, the actions performed by the writer in order to take stock of the ideas and constraints of the previously produced text to bring them to bear on the current needs. Two major types of behaviour can be identified here: repetitions and rereadings.

Repetitions can be accounted for by means of the model of WM developed by Baddeley (1986). The model postulates the existence of an "articulatory rehearsal loop" that allows the subject to keep active the information in STM by means of verbal articulation which pumps the information into a phonemic buffer, the capacity of which is limited to two or three words, which is the typical string of the group units most commonly repeated in the protocols. This will allow the processing capacity of the "central executor" to be used in other tasks. Repetition, thus, serves as a retention mechanism to compensate for the short

span of the sensory storage that has the capacity to hold a sensory copy of the text, either in acoustic or visual form, for only two seconds before and after the instant of production. This idea of repetition as a facilitative device of processing can also found in studies of situated discourse (Merrit, 1994).

Rereading has traditionally been considered an important revision subprocess but several reseachers have recently claimed that it is equally important for planning and transcribing (see Faigley et al. 1985). It is a common experience that whichever the drive that leads a writer to start to compose, once the text is started it exerts a very strong influence over what follows as new ideas have to be linked to the previous ones. It could be said that the text already produced has a kind of generative power. Perl (1978), for instance, found that her subjects stopped to read different sections of their drafts "until rehearsal led them to the creation of a new sentence" or else they "reread" the assignment wording specially when they were blocked. Flower and Hayes (1981) as well as Scardamalia & Bereiter (1987) have emphasized the importance of rereading both the topic and the text produced so far as a mechamism to produce more text, specially among immature writers. More recently, within the field of L2 writing, Whalen (1992) has included in her coding scheme a category called memory probe, intended to analyze those segments where the composition process gets blocked, the writer is unable to carry on producing conceptual or linguistic data and has no alternative but to probe his memory to keep on generating text. This strategy, according to Whalen, quite often involves rereading to access STM and LTM banks.

A plausible explanation for the strong influence of rereading on text production is probably to be found in the fact that when writers read the text already written down what they are really doing is representing to themselves not only the surface text but also the text in their heads. In other words, writers not only read the actual texts but also their plans. If a text is simply an instatiation, among many possible ones, of the writer's unwritten plans, goals and alternatives (Flower and Hayes, 1984), it seems clear that reading the text already produced may reactivate in the writer's this rich pool of unwritten possibilities which may lend themselves to be used as input for subsequent transcription processes.

But the problem with rereading, as well as with repetition, arises when one attempts to interpret it. What kind of criterion can be used to assign it a specific strategic value if it can easily be verified that reading can adopt a variety of functions depending on the context, the moment in the composition, etc.? Probably Raimes (1987) is right when she suggets that a reasonable way to approach this problem may consist of relating the reading segments to the adjacent ones. Protocols allow the coder to analyze what kind of activities precede or follow a particular instance of rereading or repetition and, hence, may help determine, partially at least, the subject´s underlying intentions. These intentions basically are either projective (reading usually followed by planning or transcription segments) or retrospective (followed by episodes of revision). In line with the concerns in this paper, only examples of the first type will be presented:

Examples of rereading followed by heuristic searches:

> (rereading) without any doubt children are very influenced by their environment family is the center of their life until they go to school and it's obvious parents are an example and a mirror ..um..puf.....an example to..a seguir an example to...es que no

es.. (the thing is that it is not...) bueno voy a poner to keep pero es que no es to keep (well I´ll put to keep although it is not)..to go on no sé si será...to keep or to go on..no sé (I don´t know) (Fernández, 2, p.3)

Examples of rereading followed by a transcription segment:

(rereading)"...problems that they have in it you have the students worry for their work worry for their work in the school because they understand study is important they understand that they must..study because their parents are talking that if they don't study they never will have a good job or they never will be something something in the life..something in the life (4) *and on the other side if you have* (15) on the other side if you have a *a family that never ask the children ..about ..her subjects ..never ask them* (7) if they have any problem.." (Castillo, 2. l. 35-41).

A recurring pattern with some subjects is that they tend to reread in L1 the stretch of text recently produced in L2 and, sometimes even the whole draft. Maybe this could be considered as another example, taken to the extreme, of the backtranslating phenomenon discussed above.

"..(the subject is about to finish writing the sentence) so (3) *he or she..is also influ-en-ced (3) in..the education education* solamente sin the (without "the") e-du-ca-ti-on..vamos a ver (let´s see) (he now starts rereading in L1 the sentence just written in L2) pienso que cada persona está influenciada por su familia durante toda la vida así que él o ella está también influenciada en la educación.." (Botía, 2, l. a especificar)

On some occasions, rereading plus repetition may lead the coder to suspect that subjects are representing some kind of problem to themselves, although they are not explicitly mentioned. It is a feeling that appears when one looks at the constituent which is repeated, the length of pauses, the point in the sentence where the rereading process stops and so on. The difficulty in these cases lies in that there are no follow up operations indicative of the nature of the problem in hand. Consequently, it seems advisable to consider these segments as representing a possible problem and to distinguish them from those in which repetition or rereading are used to generate ideas, to consolidate an idea already generated, or simply to repeat an idea while writing it down (the latter with a projective value, unlike the former). Example:

" (rereading)...because they understand that study is important they understand that they must study because their parents are talking.. their parents are talking..their parents are talking their parents are talking that if they don´t study they never will have a good job.." (Castillo, 2, l. 167-170).

CONCLUSIONS

All in all, this preliminary approximation to the linearization process in EFL writing has yielded a number of ideas from which a temptative outline of this process can be sketched. This outline is of necessity incomplete because: a) the incidence of the other two macroprocesses (planning and revision) has not been taken into account; b) the think-aloud

method poses some limitations to the study of the linearization process (Scardamalia & Bereiter, 1986); c) the relationship between the processes described here and the lingustic products brought about has not been analyzed.

Despite these limitations, the general picture that emerges from this study is that the writer, when facing the task of putting his ideas in linear form, has different possibilities in front of him:

EITHER he produces the stretch of text more or less automatically OR he gets into trouble. In this case, different operations may be triggered that vary according to the knowledge and executive control procedures of the writer. These operations have been grouped under the umbrella term self-sustained scaffolding and can be divided into two main sets: a) backward operations, basically repetition and rereading; b) forward operations, which comprise a number of problem-solving behaviours. These problems can be solved either automatically or, alternatively, they may need some sort of mediation. In the latter case, the writer can either ignore the problem or approach it by means of a variety of strategic searches.

In order to elaborate and refine the ideas contained in the outline above further research should hopefully address some of the following questions:

A) What is the relationship between the forward and backward operations? Can it be ascertained when and why a writer opts for one type or the other within the scope of the transcription process? Can these tendencies, if any, be correlated with writing expertise and proficiency in L2?

B) What kind of problems can be regarded as well and ill-defined? Is there any relationship between the fact that a problem can be considered as ill-defined and the fact that it is not tackled by the writer? Why and where do writers decide not to tackle a problem in need of mediation? Which problems are related to language use, gist, discourse or to different combinations of them?

C) What is the relationship between advanced and emergent planning and fluency in L2 transcription processes?

D) Having in mind that executive procedures in writing must provide for their own cues, would the use of external support (the use of dictionaries, etc.) make any difference in the way these executive procedures run?

F) What insights from reading research, if any, can be applied to the analysis of the rereading process in FL writers?

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