THE ROLE OF PROFICIENCY AND PSYCHOTYPOLOGY IN LEXICAL CROSS-LINGUISTIC INFLUENCE.
A study of a multilingual learner of Italian L3

1. Introduction

The aim of this article is to develop the discussion of the factors that are generally
held to be decisive for cross-linguistic influence (henceforth CLI) in third language (L3) acquisition: typology, proficiency, recency and L2 status (Williams & Hammarberg, 1998), and in particular those of typology and proficiency. We examined the oral production of a multilingual Swedish learner of Italian as L3 and the CLI from previously acquired languages (L1 and L2). The study is partly introspective, as one of the authors is the learner under study. The research questions of the study relate to the respective roles of the factors mentioned above in the acquisition of an L3. As far as proficiency is concerned, we wanted to take advantage of the longitudinal data collection method, and consider not only proficiency in previously acquired languages, but also the development of proficiency in the target language (henceforth TL). Our results indicate that both kinds of proficiency are of importance and interact with the typology factor in a way which we consider worthy of further investigation.

2. Some aspects of L3 acquisition

2.1. Defining L3 and relating it to L2

By L3 we understand a language that is acquired after L1 and one or more L2s, as suggested by Hammarberg (2001) in the following definition:

In order to obtain a basis for discussing the situation of the polyglot, we will here use the term L3 for the language that is currently being acquired, and L2 for any other language that the person has acquired after L1. It should be noted that L3 in this technical sense is not necessarily equal to language number three in order of acquisition (Hammarberg, 2001: 22).

This definition of L3 places the language under acquisition in focus, as well as the fact that it is not the first foreign language encountered by the learner (actually, it could be the third, the fourth or the fifth etc.). Because of the complexity of the possible combination of languages known to a speaker, the label L3 will in some situations have to be modified, e.g. in cases when more than one L3 are learnt simultaneously (we would then need to label the different L3s: L3A, L3B etc.). In cases such as the one that we will discuss in this paper, i.e. when we wish to consider more than one foreign language acquired before the L3 under study, we will consequently have to discuss the L2s in terms of L2A, L2B etc. We will call all the previously acquired languages (L1 and L2s) background languages.

There are several theoretical motivations for distinguishing between L2 and L3. First of all, the acquisitional experience is qualitatively different in chronologically authentic L2 acquisition, which takes place after that of the mother tongue, and in the
subsequent acquisition of other languages (L3). While the L2 learner can draw only on his/her experience of learning L1 when approaching an L2, the L3 learner has learning experience from another foreign language, or other foreign languages, which in turn leads to advantages as far as strategies and metalinguistic knowledge are concerned (Hufeisen, 1998: 171). Moreover, “second language learners have two systems that can potentially influence each other (L1ÖL2)” while “two other bi-directional relationships can take place in third language acquisition: the L3 can influence the L1 and be influenced by the L1 (L1ÖL3) and cross-linguistic influence can also take place between the L2 and the L3 (L2ÖL3)” (Cenoz et al., 2001a: 2).

2.2. Cross-linguistic influence – activation of the background languages

CLI from the background languages into the L3 has mostly been observed at formal levels of the lexicon, either in pure code-switches or in word construction attempts. The latter imply attempts to create a word in the TL on the basis of a lemma from the background language, with a morphological and/or phonological adaptation into the TL (Dewaele, 1998; Williams & Hammarberg, 1998; Hammarberg, 1998, 2001; De Angelis & Selinker, 2001; Singleton, 2001). The former, so-called non-adapted language switches (Williams & Hammarberg, 1998), appear to be particularly common during the early stages of L3 development, when knowledge of the new TL is limited (Dewaele, 2001; Hammarberg, 2001; Lindqvist, 2006). These are either isolated words or multi-word expressions in languages other than the L3 that are not adapted to the L3 phonology or morphology, but fully recognizable as belonging to another language, i.e. one of the background languages of the speaker. Lexical items from previously acquired languages tend to either slip in, in what seem to be involuntary switches (Poulisse, 1999), or be used more or less voluntarily for specific discourse purposes. It should be noted, however, that it can be hazardous to try to determine whether switches and word construction attempts are used consciously or not (Hammarberg, 2001: 27; Herwig, 2001: 128). In this study, we make use of introspective data to interpret the purpose as well as the origin of CLI.

Questions such as how the multilingual speaker can keep languages apart, on the one hand, and on the other how the languages interact in the speaker’s mental representations of grammar and in particular lexis, have been discussed intensively in recent studies (see e.g. Cenoz et al., 2001b; 2003). The connectivity between words in the mental lexicon is often discussed in terms of a network, where different formal and conceptual aspects of words are interconnected (cf. e.g. Herwig, 2001; Singleton, 2006). Many studies on multilingual speech show that one or more background languages known to the learner (L1 and/or L2) are activated in speech production,
despite the fact that another language is selected as the major language of the communicative situation. A theory that is often referred to in multilingual research is the one proposed by Green (1986), although originally suggested for L2 speech. Green has postulated that the speaker’s languages can be activated to different degrees. According to Grosjean (2001), the bilingual speaker chooses a base language, the most highly activated language, while the other language is slightly less activated, depending on its position on the language mode continuum, the language mode being “a state of activation of the bilingual’s languages and language processing mechanisms at a given point in time” (Grosjean, 2001: 3). According to this model, which is extended also to trilingual speech, contextual factors, such as interlocutor, situation, topic etc. set the language mode, and a bilingual speaker can be either in a monolingual or a bi- or multilingual mode, depending on e.g. the interlocutor’s linguistic competencies. Code-switching is a result of more than one language being activated in the bilingual (or multilingual) mode. If the activation level of the languages is set only by such contextual factors, as suggested by Grosjean (2001), there is no reason to expect languages that are not shared by the interlocutors to be activated to any higher degree in the speech of a multilingual. However, data from L3 learners’ oral production show that languages known only to the learner, and that are not shared by the interlocutors, are activated in L3 speech, as will be shown in the present study. Therefore, it might be fruitful to make a distinction between contextually driven switches on the one hand, and, on the other, switches that are related to internal, individual and psycholinguistic factors.

Another model, developed by de Bot (2004), on the basis of Levelt’s speaking model (1993 version), also aims at accommodating bi- and multilingual speech, and its characteristics in terms of selection of language and code-switching. While Grosjean’s model accounts for why we switch languages in certain contexts, de Bot considers factors internal to the speaker and to the linguistic systems, such as proficiency level, frequency of use and similarity between languages. According to de Bot (2004: 23-24) words from more than one language compete for activation (both in production and perception), and in order for a word to be competitive, a minimal level of proficiency/activation is needed. Also, “shared forms at the phonological level tend to co-activate elements from different languages” (2004: 24).

2.3. Four determining factors

De Bot’s suggestion of the impact of proficiency, recency of use and similarity, as important characteristics of an influencing background language, is not new. These factors, among others, have been discussed in earlier studies, e.g. Williams & Hammarberg (1998)
and Hammarberg (2001).² The results in these studies indicate that proficiency in the background language, recency of use and typological similarity, along with the L2 status, collaborate in a complex way. The results discussed in Williams & Hammarberg (1998) and Hammarberg (2001) indicate that the learner under observation relied on knowledge of a previously acquired L2 rather than on the L1, at least as far as the word construction attempts and switches of function words were concerned. Consequently, in the choice between L1 and L2 the L2 status per se seems to be an important factor.³

The concept of psychotypology (Kellerman, 1983), i.e. similarities and differences between languages, as perceived by the learner, is sometimes brought up for discussion in L3 studies. To better understand the role of similarities between languages, it can be interesting to assess what the individual knows or believes about typological relations. We believe that it is difficult to understand the role of psychotypology in large scale studies with big groups of learners. It is however easier to understand in case studies such as Williams & Hammarberg (1998), De Angelis & Selinker (2001) and the present study. Detailed introspection may be a way of obtaining deeper insight into the learner’s perception of the similarities and differences between languages and how this perception might play a role in language processing.

2.4. The target language proficiency

The proficiency level in the TL is also a factor that we assume to be of relevance for transfer from the background languages. Studies show that in order to express him/herself in the TL, the learner uses words from L1, either as a compensatory strategy or in slips of the tongue (cf. Kellerman, 1983; Poulisse, 1999). This need seems to decrease as the TL lexicon develops (cf. Poulisse & Bongaerts, 1994).⁴ A small number of earlier L3 studies indicate that lexical transfer from previously acquired languages (L1 and/or L2s) is highly present when there is a low level of proficiency of the TL, but decreases as the knowledge of the TL improves. Williams & Hammarberg (1998), Hammarberg (2001) and Dewaele (2001) agree with this viewpoint, although they do

² For discussions of the factors that condition the influence of the background languages, see Cenoz (2001, 2003).
³ Differently from Williams & Hammarberg (1998), who distinguished between instrumental language and supplier language, reaching the conclusion that different factors determine the choice of background language in the two cases, such a distinction is not made in the present study.
⁴ In their study on Dutch learners of English L2, Poulisse & Bongaerts (1994) found that the number of unintentional L1 switches was related to the proficiency in the TL.
not explicitly demonstrate this in their data, at least not in the same way as shown by Lindqvist (2006).

2.5. Italian as L3

We find it interesting to observe the acquisition of Italian as a foreign language, for at least two reasons: first of all, as a foreign language, Italian is predominantly acquired as an L3, i.e. after at least one other foreign language. Second, because of its many similarities to other Romance languages, it is an interesting test case of CLI. The importance of the close relation between Spanish and Italian in L3 acquisition for lexical CLI from Spanish into Italian has been studied by De Angelis & Selinker (2001) and De Angelis (2005). In these studies, it was shown in a convincing way that learners do not always manage to define the borders between the two languages, not knowing whether to attribute certain words to Spanish or Italian.

3. This study

3.1. The learner and her background languages

In the present study, which is partly introspective, it is important to note that our learner has an unusual background which has not been that common in earlier studies on CLI (except for e.g. Hammarberg & Williams, 1993; Williams & Hammarberg, 1998). First of all, the learner is writing a thesis in the field of SLA, and it follows that she has knowledge about the study of language acquisition, in contrast to the “average” informant in SLA studies. Therefore, she has a certain awareness of how tests are carried out and how the data can be analysed. It was however agreed that as she was participating in the recordings predominantly as a learner, she had to try to disconnect herself from her role as a researcher. The learner felt that she was able to do so, since the task of speaking Italian took so much effort. In fact there was no time to think about the production from a researcher’s point of view, as the whole focus was placed on trying to communicate in Italian.

It is also of interest that the learner has been trained in linguistics, because this means that she has a developed metalinguistic knowledge about languages in general. This fact also distinguishes her from the “average” learner. This certainly seems to play a role in the learning process in general, as emerges from the data and the retrospective comments.

Another quality that characterizes this particular learner is her knowledge of several
background languages, which might also influence the acquisition of Italian. She represents a type of “experienced” learner, who might draw on her earlier learning experience when acquiring a new language. It is of great importance that she has knowledge of two other Romance languages, Spanish and French. This can be observed, for instance, in the learner’s rapid acquisition of the tense-aspect system and other morphological phenomena of the Italian verb system (Bardel, 2005).

Her background languages, in chronological order, as regards the starting point of acquisition, are as follows (cf. table 1):

<table>
<thead>
<tr>
<th>Language</th>
<th>Age of onset</th>
<th>Year of onset</th>
<th>Learning period</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1 Swedish</td>
<td>(from birth)</td>
<td>(1975)</td>
<td>(mother tongue)</td>
</tr>
<tr>
<td>L2A English</td>
<td>10</td>
<td>1985</td>
<td>9 years in school and 1 year at university</td>
</tr>
<tr>
<td>L2B French</td>
<td>13</td>
<td>1988</td>
<td>6 years in school, 3 years at university and 1,5 years of doctoral studies</td>
</tr>
<tr>
<td>L2C Spanish</td>
<td>16</td>
<td>1991</td>
<td>1 year during high school education</td>
</tr>
</tbody>
</table>

Table 1. The learner’s background languages

The way the different factors mentioned in the foregoing, proficiency, recency, L2 status and typology apply to the learner’s background languages is shown in table 2. The table is based on the informant’s own estimations.

<table>
<thead>
<tr>
<th>Swedish L1</th>
<th>English L2</th>
<th>French L2</th>
<th>Spanish L2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proficiency</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Recency</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>L2 status</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Typology</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>

Table 2. Proficiency, recency, L2 status and typology factors in regard to the background languages

As far as proficiency is concerned, Swedish is without a doubt the strongest language since it is the learner’s mother tongue and is used every day. As far as the L2s are concerned, both English and French are strong, while the proficiency level of Spanish is much lower than of the other L2s. The informant had only studied Spanish for a
one-year period during High School, eleven years before the start of the Italian beginner
course. The learner also took a course devoted to comprehension in Romance languages
approximately six months before the onset of the Italian course. This course did not
include oral production however, since the aim was to learn to read linguistic articles
written in Romance languages.

As for the recency factor, we find the same pattern as for the proficiency factor.
Swedish is of course recent, and English is also a language that the informant comes
into contact with almost on a daily basis. On the other hand, French is the language that
the informant uses mostly in her work as she is writing her thesis in French, and
accordingly, it is also highly recent. One could argue that Spanish is also recent because
of the reading course, but according to the informant’s own estimation, it is still much
more remote than the other background languages, which are used in her everyday life.

French, English and Spanish have L2 status, and, finally, from a typological point
of view, French and Spanish are closer to Italian than English and Swedish.\footnote{This is of course a somewhat rough conclusion, as English could be regarded as closer to the Romance
languages than Swedish, particularly as far as lexis is concerned, cf. Singleton (1999), as regards the
relation between English and French.} Regarding
this particular study, it is more important to note that from a psychotypological
viewpoint, the informant was quite aware of the fact that French, Spanish and Italian
are related Romance languages, and more closely connected to one another in lexis
and grammar, but more distant from the Germanic background languages of English
and Swedish. Moreover, the Romance languages resemble each other to a different
extent at different linguistic levels. In fact, the learner perceived Italian and Spanish
to be closer at a phonological level, whereas she felt that French has a different
phonological onset compared to the other two languages.

Summing up, the background language that reaches the highest overall value for
these four factors is French, and it is therefore reasonable to hypothesize that it will
have a higher level of activation than the other languages. As far as the other foreign
languages are concerned, one could hypothesize that English will also have a high
level of activation, because of the proficiency and the recency factor, while Spanish is
likely to have a lower activation level.

3.2. Proficiency in the target language

In order to be able to connect CLI to the proficiency level of the TL, we tried to
characterize the latter at the time of the various recordings. We looked at two aspects:
the quantitative development of vocabulary (Lindqvist & Bardel, 2004ms.) and the use of verb morphology (Bardel, 2005). From these studies it is clear that the learner advances quickly during the course. First, the speech rate increases throughout the recordings. Second, the number of types and tokens reaches a peak by the third recording. In this recording, the type-token ratio is also at its lowest point, which indicates that the learner’s proficiency level is most developed in this recording. Also the verb system comes to a peak at the third recording, i.e. at the end of the language course, indicating high sensitivity of finiteness encoding.6

3.3. The course

The course was an intensive university summer course for beginners, and the training plan was as follows: A two-week intensive course, with lessons five days a week (five hours a day) followed by a seven-week interval devoted to individual studies. After this followed a two-week intensive course with daily lessons once again.

3.4. The recordings

The data were gathered at Stockholm University during 2002-2003. As is shown in table 3, the learner was recorded on four occasions: Once, before the start of the course (bear in mind that the learner had some knowledge of Italian from the reading course) once again after the first two weeks, and a third time directly after the course. Finally, she was recorded six months after the course had finished. The learner had not been in contact with Italian after the course, and we were interested to know whether her proficiency level had deteriorated, and if so, whether this had an effect on the amount of CLI.

<table>
<thead>
<tr>
<th>Recording</th>
<th>Date</th>
<th>Temporal relation to course</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>05-06-2002</td>
<td>Before course start</td>
</tr>
<tr>
<td>II</td>
<td>19-06-2002</td>
<td>Two weeks after course start</td>
</tr>
<tr>
<td>III</td>
<td>02-08-2002</td>
<td>Directly after the end of course</td>
</tr>
<tr>
<td>IV</td>
<td>05-02-2003</td>
<td>Six months after the course</td>
</tr>
</tbody>
</table>

Table 3. The recordings

6 For previous studies on the acquisition of Italian verb morphology see Berretta (1990), Giacalone Ramat (2003).
The interlocutor was a native speaker of Italian who had lived in Sweden for 6.5 years at the time of the recordings. He has knowledge of Swedish, English, German and French. The learner was aware of the fact that he had knowledge of Swedish, but she did not know the level of his proficiency. It is important to note that she did not know of any other languages known to the interlocutor.

The recordings consist of guided conversation and some retelling tasks (cf. table 4).

<table>
<thead>
<tr>
<th>1st recording</th>
<th>2nd recording</th>
<th>3rd recording</th>
<th>4th recording</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview</td>
<td>Interview</td>
<td>Interview</td>
<td>Interview</td>
</tr>
<tr>
<td>Two comic strips</td>
<td>Two comic strips</td>
<td>Two comic strips</td>
<td>Two comic strips</td>
</tr>
<tr>
<td>Three cartoons</td>
<td>Three cartoons</td>
<td>Three cartoons</td>
<td>Three cartoons</td>
</tr>
</tbody>
</table>

Table 4. Design of data collection

Transcriptions were made in the CHAT-format (MacWhinney, 2000).

4. Results and discussion

4.1. Code-switching

As is shown in table 5, there is quite a complex pattern with respect to the code-switches.7

<table>
<thead>
<tr>
<th>Recording</th>
<th>Swedish L1</th>
<th>English L2</th>
<th>French L2</th>
<th>Spanish L2</th>
<th>Unidentified cases</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1</td>
<td>2%</td>
<td>0</td>
<td>0%</td>
<td>9</td>
<td>19%</td>
</tr>
<tr>
<td>II</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>8%</td>
<td>8</td>
<td>67%</td>
</tr>
<tr>
<td>III</td>
<td>15</td>
<td>75%</td>
<td>0</td>
<td>0%</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>IV</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>6</td>
<td>60%</td>
</tr>
<tr>
<td>Totale</td>
<td><strong>16</strong></td>
<td><strong>18%</strong></td>
<td><strong>1</strong></td>
<td><strong>1%</strong></td>
<td><strong>27</strong></td>
<td><strong>30%</strong></td>
</tr>
</tbody>
</table>

Table 5. Total number of code-switches

7 The instances of code-switches are mostly isolated words, in this material; there are no full sentences, but a few cases of nominal phrases (cf. appendix I).
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It is clear that Spanish is the background language that is most frequent (51% of the code-switches). This is seen throughout all the recordings, but it is interesting to note that it is due to the very high frequency in the first recording. In the following recordings the number of Spanish code-switches then decreases drastically. Swedish code-switches are rare, or even absent, in recordings one, two, and four, but in the third recording Swedish seems to be the most activated background language. On the other hand, the amount of influence from French is rather stable, the number of code-switches ranging from four to nine. Somewhat surprisingly, English seems to be hardly activated at all, with only one instance of code-switching in the second recording, although the L2 status, the recency and the proficiency factors are strong. We find the use of Spanish and Swedish especially interesting, and will therefore now discuss these two languages in particular.

Spanish, which incontestably is the weakest and least recent background language, seems to be highly activated in the first recording. The way we see it, the main factor of interest here is proficiency, but it will have to be extended in two ways. First of all, our data indicate that a background language with low proficiency seems to be more activated than those with high proficiency. Second, the proficiency level of the TL will have to be included as a determining condition for CLI, since different background languages are used for code-switching at different stages in the acquisition of Italian (cf. table 5).

A possible explanation of the high number of Spanish code-switches in the first recording is that the low proficiency in both Spanish and Italian leads to confusion when trying to separate these languages from each other. Very often, the learner is not even aware of the fact that she actually does insert Spanish words. This statement is based on indications from the introspective material. When listening to the recordings, the informant was taken by surprise as she heard herself use the word y (‘and’), for example, which she most certainly knew to be Spanish, as opposed to the Italian e. In other cases she is unsure whether a word is Spanish or Italian (cf. De Angelis, 2005). This is the case in the first recording with the Spanish word en, which is used instead of the Italian in (‘in’):

(1) *KAT: y@sl poi eh hm gli &uomon uomini eh hm va [//] vanno eh en@sl altre # café # eh e ### e &m &ma mangiare eh qualcosa. (Katarina 1)

‘And then the men go into another café and eat something’.

Often, the Spanish words are not followed by any self-repairs, nor are they followed or preceded by any hesitation phenomena (cf. y in the example above). Therefore, it seems that the learner is unaware of these switches. On the other hand, the word en in the
same example is preceded by a filled pause, which seems to indicate hesitation. These are, of course, only indications, but when the learner was asked about this, she reported that she had declarative knowledge of the fact that y is Spanish, and e Italian, as early as the first recording, but she found that she could not always separate them at a procedural level. Therefore, y could be defined as a slip of the tongue (Poulisse, 1999: 92). As for en, on the other hand, the learner reported that she had no clear understanding at the declarative level about whether en was Italian or not. Thus, there is no reason to believe that these Spanish words are used as a compensatory strategy, if such a strategy is defined as a deliberate use of another language in order to solve a lexical problem (Poulisse, 1999: 54-55), but rather, it is a matter of not being able to separate the two languages.

The insecurity concerning the partial overlap of Spanish and Italian lexicon is testified in the retrospective material:

I think that I mix up Spanish and Italian sometimes, become unsure whether a word is Spanish although I think it is Italian. […] When I said ahora I was really unsure whether it was Italian or Spanish. Same thing with simpatico. (05-06-2002).

From this report it emerges quite clearly that the informant does confuse Spanish and Italian, ahora being the Spanish word for ‘now’, whereas the Italian counterpart is adesso or ora. In actual fact, simpatico (‘nice’, ‘pleasant’) exists both in Spanish and Italian (the spelling differs slightly: Italian simpatico, Spanish simpático). So, as this report shows, the learner has great difficulties in distinguishing between Italian and Spanish during the first recording. It is interesting to note that our data are very similar to those of De Angelis & Selinker (2001), reported to in 2.5. Also in their study, the learner, a native speaker of French, relied more on her weakest background language (Spanish), in the production of Italian.

The French code-switches on the other hand are often immediately followed by self-repairs, which makes them more look like slips of the tongue. This indicates that the learner’s high proficiency in French means that she can separate the two languages: at least at the level of declarative knowledge:

(2) KAT: alla non [/] non ho &capi capito chi ha messo la mosca e [/] e perché alla non lo so mais@f [/] ma # alla cucina prima hm è il cuoco che # ha messo la mosca # credo è vero? (Katarina 3)

‘So I can’t understand who put the fly in the soup and why. I don’t know, but in the kitchen, at first, it’s the chef who puts the fly there I think, isn’t it?’
Furthermore, there seems to be an interplay between the proficiency factor and the typology factor, as regards the Spanish code-switches. Compared to French, Spanish and Italian are closely related, especially at a phonological level. As a consequence, Spanish words may more easily “slip in” without the learner noticing, whereas it would take a greater processing effort and consciousness in order to insert a French word, since that would imply a fundamental change in pronunciation in general. As we noted earlier (section 3.1) the learner has confirmed her perception of this phonological resemblance between Spanish and Italian, and, perhaps more importantly, of the differing French phonology. Other examples of Spanish words that are inserted, and that are close to Italian at the level of pronunciation, are: no (9 instances, Italian non), treinta (2, Italian trenta), pero (1, Italian ma or però), lengua (1, Italian lingua), todo (1, Italian tutto), tarde (1, Italian tardì).

As we have seen, the Spanish code-switches decrease quite drastically in recordings two, three and four, suggesting that as the TL develops, it becomes easier to distinguish Italian from Spanish. According to the informant’s introspective comments, she feels more confident when speaking Italian from the second recording onwards. She also mentions that she can separate Spanish from Italian more easily now, and this quite obviously keeps the Spanish code-switches at bay. It thus seems that the lower the proficiency in the TL, the greater the possibility is that a typologically, and above all phonologically similar language will interact in the speaking process.

Staying with the idea that the proficiency in the TL is crucial in explaining CLI, we would also like to point at the high number of Swedish code-switches in the third recording. It might appear strange that the L1 is almost only activated in this recording, where the TL proficiency is at a peak, and not in the others. According to our interpretation, this result is however connected with the development of the TL: the learner reports that she feels more at ease and more courageous when speaking Italian at this point. It follows that she is now more talkative and more focused on communicating than on the formal aspects of the language. Frequently, this seems to lead to situations where the learner feels forced to convey her communicative intentions, which in turn leads to the need to find lexical support in a background language. Swedish is mainly used in a conscious, strategic way, as a compensatory strategy with the aim of overcoming lexical problems in Italian. It is worth noting that, as is the case in example 3, most of the Swedish code-switches regard content words (cf. appendix I).

(3) *KAT: allora c’è una coppia hm che guardano [/] guarda la tivù hm e improvvisamente ascoltano
eh ## che qualcuno eh bussa alla porta hm.

*KAT: eh è il [/] il hm # non conosco eh la parola eh ma brevbärare@s hm che hm viene con una lettera # e la dà all’ uomo.
(Katarina 3)
‘So there is a couple watching TV, and suddenly they hear that somebody is knocking on the door. It’s the, I don’t know the word, but mailman, who comes with a letter and he gives it to the man’.

One possible explanation of the high amount of Swedish code-switches in the third recording could be a lower degree of formality in this recording. The learner perceived the situation as less formal on this occasion compared to the previous recordings. At this point, the learner had got used to the interview situation and felt more comfortable when performing the tasks. This informality could induce her to call upon Swedish, the language she knew she had in common with the interlocutor (cf. Grosjean, 2001). Informality has been suggested by Dewaele (2001) as a factor that favours code-switching.

5.2. Word construction attempts

When it comes to the word construction attempts (cf. table 6), we find quite a different pattern as compared to the code-switches.

<table>
<thead>
<tr>
<th>Recording</th>
<th>Swedish L1</th>
<th>English L2</th>
<th>French L2</th>
<th>Spanish L2</th>
<th>Unidentified cases</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>8 (89%)</td>
<td>0 (0%)</td>
<td>1 (11%)</td>
<td>9 (100%)</td>
</tr>
<tr>
<td>II</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>6 (86%)</td>
<td>0 (0%)</td>
<td>1 (14%)</td>
<td>7 (100%)</td>
</tr>
<tr>
<td>III</td>
<td>0 (0%)</td>
<td>1 (8%)</td>
<td>10 (83%)</td>
<td>0 (0%)</td>
<td>1 (8%)</td>
<td>12 (100%)</td>
</tr>
<tr>
<td>IV</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>6 (67%)</td>
<td>0 (0%)</td>
<td>3 (33%)</td>
<td>9 (100%)</td>
</tr>
<tr>
<td>Total</td>
<td>0 (0%)</td>
<td>1 (3%)</td>
<td>30 (81%)</td>
<td>0 (0%)</td>
<td>6 (16%)</td>
<td>37 (100%)</td>
</tr>
</tbody>
</table>

Table 6. Total number of word construction attempts

Here, French is the main source language of transfer, whereas Spanish, as well as Swedish, is non-existent. There is only one instance of an English influence, as emerges in the above table. Contrary to the code-switches, the word construction attempts are used in a more strategic way and are most often conscious attempts to overcome lexical problems in the TL. In the following example, the learner uses the French word sévère(s) (‘severe’, ‘harsh’) but in accordance with Italian pronunciation [seβere]:

As to the identification of source language, our interpretation is based on the learner’s comments. Certainly, many of the word construction attempts could be based on Spanish (cf. Spanish/French: doctorante/doctorante, pie/pied, letra/lettre, sorprendido/surpris, contenta/contente, preparer/préparer, severo/sevère, obligatorio/obligatoire, de/de, oeste/oueste, funcionar/fonctionner, triste/triste, intervención/intervention, otoño/automne), but the learner reported that she had no knowledge of these Spanish words at the level of production.
**THE ROLE OF PROFICIENCY AND PSYCHOTYPOLGY IN LEXICAL CROSS-LINGUISTIC INFLUENCE**

(4) *KAT: in Francia era più severe penso e i profissore[*] erano più # hm # duri [=! ride] severe e #
avevo eh rispetto per i professori più che # qua a Stoccolma.
(Katarina 3)

‘I think that the atmosphere was harsher in France. The teachers were more severe and I felt more respectful towards the teachers there than here in Stockholm’.

The word form *severe* (fem. pl. of *severo*) actually exists in Italian, and it could therefore be claimed that Italian is the source of this word construction (i.e. an intralingual influence). However, the learner had no knowledge of the Italian word form. (Neither was she aware of the English word *severe*). The consciousness of the French word construction attempt, emerges from the verbal report:

I took a chance. I started out with the French word. (05-08-2002).

The informant also produced some incorrect forms on the basis of French, in active attempts to build an Italian word on a French basis. In the following example, the French word that influences the learner is *écharpe* – ‘scarf’.

(5) *KAT: e poi hm eh hm mette una [/] un escar::pa [*] esciarpa [*].
[ekarpa] [eʃarpə]
*PAO: una sciarpa si # perché una scarpa lo sai cos’è.
*KAT: eh sciarpa.
(Katarina 2)

‘And then he puts on a escarpa esciarpa.’
‘A scarf yes because, a shoe, you know what that is.’
‘Scarf.’

There are also some unconscious word construction attempts created on the basis of French words:

(6) *KAT: potrebbe hm fare lire[*] più libri ai studenti. [liː]ere
(Katarina 3)

‘You could make the students read more books.’

It clearly emerges from the introspective material that the learner did not intend to create an Italian word on the basis of French. When listening to the recording, she reported:
I say *lire* instead of *leggere*, something that I was totally unaware of. I do know that it should be *leggere* in Italian. (05-08-2002).

How can the factors account for the dominance of French regarding the word construction attempts? Once again, we resort to the proficiency and the typology factors. When it comes to proficiency, it seems that high proficiency in a background language leads to word construction attempts. The reason why Spanish is not activated in this case is probably the low proficiency in that language, which, as we have seen, resulted in mostly uncontrolled code-switches. The word construction attempts mainly concern content words (cf. appendix II), and we assume that the learner simply does not know these words in Spanish, and that therefore, she chooses to rely on a stronger background language, French, in trying to produce an Italian word. Furthermore, typological relations seem to be decisive here, since the other two strong background languages, English and Swedish, are not active in the word construction process. As far as Swedish is concerned, this result is probably related to the learner’s awareness of the fact that there is no point in trying to adapt a Swedish word into Italian, given the typological differences between these languages. It is interesting to note however, that the proficiency factor rules out the psychotypology factor in the choice between French and Spanish, when it comes to word construction attempts.

Thus, CLI is again explained in terms of interplay between proficiency level and typological relations. With respect to word construction attempts, a high level of proficiency in a background language seems decisive, which is not the case for the code-switches. The typology factor is also applied in a wider sense regarding the word construction attempts, compared to the code-switches. Here, the relatedness of the language systems in general seems decisive, not the resemblances in pronunciation. The learner’s perception of French and Italian as closely related languages influences her in drawing from her knowledge of French when confronted with problems in the production of Italian.

6. Concluding remarks

In this study we have focused on instances of lexical CLI in a learner’s oral production, showing that the background languages, Swedish L1, English L2, French L2 and Spanish L2 seem to have different functions in the oral production of Italian. Swedish L1 is activated mainly in the third recording, where the learner passes to the bilingual mode (Grosjean, 2001) relying on the interlocutor’s knowledge of Swedish. There are no traces of Swedish in the word construction attempts. English L2 seems to have a low level of activation, since there is only one instance of English code-switching, and one word construction attempt clearly based on English. Spanish L2 is
the main source for code-switches, whereas word construction attempts are mainly based on French L2. In order to explain these results – somewhat surprising considering the high proficiency level and the recency of use of both English and French – we have tried to refine the discussion of proficiency and typology as determining factors for CLI. We hypothesize that low proficiency in a background language, as well as in the TL, can be a decisive factor for code-switching. This would explain why the learner frequently uses Spanish, which is her least developed L2, when she begins to learn Italian. On the other hand, the dominance of Spanish over the other background languages, as a source for code-switching, could be due simply to the high similarity between Spanish and Italian, and has to be further investigated with new data, where learners with high proficiency in Spanish are taken into account. We have also pointed out that the typological relationship between Spanish and Italian plays a role, not only in a general sense as language systems, but above all at the phonological level where the pronunciation is relatively similar as opposed to French, which would allow for Spanish words to be inserted more naturally, and as it seems, unconsciously (cf. de Bot, 2004). As for the word construction attempts, our data indicate that high proficiency in the background language is determinative, since the learner uses her strongest Romance background language, which is French, for this purpose. Once again, however, there seems to be an interplay between proficiency and typology, since French is used as opposed to Swedish and English, which are both high proficiency background languages but typologically more remote to Italian.

Camilla Bardel
camilla.bardel@fraita.su.se

Christina Lindqvist
christina.lindqvist@fraita.su.se

REFERENCES


BERRETTA M., Il futuro in italiano L2, in Quaderni del Dipartimento di Linguistica e letterature comparate, Università di Bergamo 6, 1990, 147-188.


GREEN D. W., Control, activation and resource: a framework and a model for the control of speech in bilinguals, in Brain and Language 27, 1986, 210-223.


HAMMARBERG B., Roles of L1 and L2 in L3 production and acquisition, in J. CENOZ, B. HUFEISEN
THE ROLE OF PROFICIENCY AND PSYCHOTYPOLY IN LEXICAL CROSS-LINGUISTIC INFLUENCE


Lindqvist C. & Bardel C., Lexical development in a fast learner of Italian, 2004ms.


### Appendix I. Code-switches

<table>
<thead>
<tr>
<th>Rec.</th>
<th>Swedish</th>
<th>English</th>
<th>French</th>
<th>Spanish</th>
<th>Unidentified cases</th>
<th>Tot.</th>
</tr>
</thead>
</table>
### The role of proficiency and psychotypology in lexical cross-linguistic influence

<table>
<thead>
<tr>
<th></th>
<th>‘postman’,</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>‘plåster’</td>
<td>‘plaster’</td>
<td>‘en halsduk’</td>
<td>‘a scarf’</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>si (4) ‘if’,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>qui (2) ‘who/which’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>en (2) ‘in/to/at’,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>hay ‘there is’,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>perdón ‘sorry’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>1</td>
<td>27</td>
<td>46</td>
<td>0</td>
<td>90</td>
</tr>
</tbody>
</table>

**Total** 16 1 27 46 0 90
### Appendix II. Word construction attempts (types). Sw = source word; tw = target word

<table>
<thead>
<tr>
<th>Rec.</th>
<th>Swedish</th>
<th>English</th>
<th>French</th>
<th>Spanish</th>
<th>Unidentified cases</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>-</td>
<td>-</td>
<td><strong>obligatoare</strong> (sw: obligatoire, tw: obbligatorio), <strong>getta</strong> (sw: jette, tw: getta), <strong>escarpa</strong> (sw: écharpe, tw: sciarpa), <strong>esciarpa</strong> (sw: écharpe, tw: sciarpa), <strong>amusante</strong> (sw: amusant, tw: divertente), <strong>dovinato</strong> (sw: deviné, tw: indovinato)</td>
<td>-</td>
<td><strong>ginnastica</strong> (possible sw: fr. gymnastique, swe. gymnastik; tw: ginnastica)</td>
<td>7</td>
</tr>
</tbody>
</table>
### THE ROLE OF PROFICIENCY AND PSYCHOTYPOLGY IN LEXICAL CROSS-LINGUISTIC INFLUENCE

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td>IV</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>1</td>
<td>30</td>
<td>0</td>
<td>6</td>
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