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# Reverse Lexical Transfer in a Multilingual's Spoken Production in her Native Language

## 1. Introduction

There is a lot of evidence that the languages present in the bi-/multilingual mind, even though stored separately, interact with each other. Both psycholinguistic (e.g. De Angelis 2007, Pavlenko 2009a) and neurolinguistic (e.g. Paradis 2004) research shows that a person who has appropriated[1] at least two languages (or interlanguages) possesses a highly complex and dynamic linguistic competence, or multicompetence, whose inherent characteristic is cross-linguistic influence (Cook 1991, 2003b, see also: Kecskés/Papp 2000, Herdina/Jessner 2002). Interestingly, the effects of cross-linguistic operations have been observed not only in the production of an insufficiently mastered language, but also in native (or dominant) language production. In the past, reverse transfer was usually treated as a subfield of the research domain of first language attrition. However, it may also be analysed as simply one type of cross-linguistic influence, which does not necessarily lead to attrition (see e.g. Schmid/Köpke 2007). Unfortunately, research studies usually focus on reverse transfer from a second language (L2) to the first one (L1); hardly any studies have been conducted that would scrutinise the phenomenon of transfer from a third or additional language (L3+) to a previously appropriated one. The present study is a modest attempt to fill this research gap in that it examines the influence of the second, third and fourth language of a multilingual on her native language production.

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[1] In the present article, the terms 'acquire' and 'learn' (and their derivatives) refer to language development in natural and in school conditions, respectively (Krashen 1981). In situations where the context of language development is unknown, the term 'appropriate' (and its derivatives) is used as a hypernym of both terms (see Paradis 2009).

# 2. Background

Cross-linguistic influence (CLI) is any (positive or negative) influence of the elements/features of some non-target language(s) on the target (currently used) language (e.g. Sharwood Smith/Kellerman 1986:1, Laufer 2003:20). It may involve two or more languages present in the mind (see e.g. De Angelis 2007, Jessner 2008, Chłopek 2011). It may take place either directly, i.e. between language systems, or indirectly, i.e. with the mediation of the conceptual system. The latter scenario is possible because in a bi-/multilingual mind there is always one store of conceptual representations (or concepts), which is linked to two or more linguistic systems. Conceptual representations are shaped not only by various non-linguistic experiences but also by the semantics of each language (for example, the concept HOUSE has been partly shaped by the semantic features of the word *house*) (Fabbro 1999, Paradis 2004, Pavlenko 2009b, Chłopek 2012).

The most often observed kind of CLI is interlingual transfer. It involves the activation of some non-target language element or feature, which is usually formally and/or semantically similar to the target language element or feature (Færch/Kasper 1987:112, Odlin 1989:27). At beginning stages of language appropriation transfer usually involves formal similarities between languages and at later stages it begins to concern semantic cross-linguistic similarities (Ringbom 2007:8, 54–58).

The influence of a language that was appropriated later in life on a previously appropriated one (typically the L1) is called **reverse transfer** (RT). This term is not fully appropriate, since it suggests the existence of 'forward' and 'backward' directions of CLI. As neurolinguistic research shows, languages are stored in the long-term memory not according to the sequence of their development, but according to the age, methods and contexts of language appropriation and use, as well as the achieved proficiency level. Depending on these factors, each language is stored in different proportions in the procedural and the declarative memory, has different connections with the conceptual system and the limbic system, and engages in interactions with other languages (e.g. Fabbro 1999, Paradis 2004, 2009).[2]

Several research studies show that an L2 may influence an L1 within all language subsystems – lexis, phonology, morpho-syntax, pragmatics and discourse (see e.g. Seliger/Vago 1991, Kecskés/Papp 2000:15–36, Schmid 2002, Cook 2003a, Schmid et al. 2004, Köpke et al. 2007, Gürel 2008).[3] A few studies conducted in an L2-speaking environment indicate the existence of *lexical* RT (Haugen 1950, Romaine 1989/1995:120–180, Pavlenko/Jarvis 2002, Jarvis 2003,

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[2] As a matter of fact, the term 'transfer' itself is not a happy one. The word 'transfer' suggests some kind of shift or movement. However, in reality nothing is shifted or moved in the brain – only connections between appropriate neurons are (de)activated.

[3] Some research studies were in fact conducted with multilinguals, but in spite of this they analyse transfer from one non-native language only.

Laufer 2003, Porte 2003, Ramírez 2003). For example, Haugen (1950) enumerates various instances of lexical transfer which he identified in the speech of Norwegian immigrants to the USA in their L1; Ramírez (2003), who conducted interviews with native Spanish speakers living in the USA, identified several occurrences of borrowing and false friends phenomenon; Jarvis (2003) discovered RT at the lexicosemantic and idiomatic levels in the speech of a Finnish immigrant to the USA. RT may also take place in school instruction contexts (Kecskés/ Papp 2000). For example, Latkowska (2006) noted some instances of calques of English L2 idiomatic expressions, fixed phrases and collocations in the Polish L1 production of her respondents on a translation task.

How does reverse transfer proceed in the mind with **three (or more) languages**, i.e. when there is more than one potential source of transfer? A few psycholinguistic studies dealing with CLI in the multilingual mind mention instances of RT (in more or less detail), mainly at the lexical level (Williams/Hammarberg 1998, van Hell/Dijkstra 2002, Cedden/Onaran 2005, Sercu 2007, Chłopek 2009a), but also at the morpho-syntactic (Cedden/Onaran 2005, Cheung/Matthews/Tsang 2011), orthographical (Schwartz et al. 2007), phonological/phonetic (Cruz-Ferreira 1999) and pragmatic (Cenoz 2003) levels. Most studies point to the existence of L2/L3 – L1 transfer, but some (Cedden/Onaran 2005, Cheung/Matthews/Tsang 2011) indicate that L3 – L2 transfer is also possible.

Several significant factors influence the intensity and kind of RT. The studies conducted with L3+ learners/users unanimously show that relatively high proficiency in a non-target language contributes to intensive RT from this language. However, Cruz-Ferreira's (1999) study demonstrates that RT is possible even in early childhood between developing language systems. Another commonly mentioned factor is the recency of use of a non-target language, which lowers its activation threshold and makes it better available for CLI. On the other hand, at least one study shows that recent activation of a non-target language is not necessary for RT to occur: van Hell/Dijkstra (2002) discovered that RT is possible even in a monolingual L1 mode. Moreover, an interesting study conducted by Kovelman/Baker/ Petitto (2008), who used functional magnetic resonance imaging, indicates that the use of the L1 by early bilinguals involves wider engagement of the language areas than is the case with monolinguals, which probably means some activation of the L2 even when it is not necessary for a given linguistic task.

A few research studies show that another factor that may contribute to the occurrence of RT is close typological distance between languages (Williams/ Hammarberg 1998, van Hell/Dijkstra 2002, Cedden/Onaran 2005, Schwartz et al. 2007, Chłopek 2009a). Sercu (2007:66) believes that '[w]hen reverse transfer occurs this may […] be related to the fact that specific lemmas with complex intralinguistic and/or cross-linguistic semantic and/or formal links are pre-eminent candidates for being involved in this kind of transfer'. The use of specific strategies may induce RT as well. According to Williams and Hammarberg (1998), RT

may be generated by an unconscious process of translating backward from a new language to the L1, dictated by an attempt to render the form searched for; Cruz-Ferreira (1999) believes that the L2 – L1 transfer of prosodic patterns observed in one of her respondents was an effect of conscious language learning strategies which consist in testing new meaningful patterns in the known language(s); Cenoz (2003) mentions the intentional use of simplification strategies at the pragmatic level; Chłopek (2009a) found that a multilingual person may use their complex linguistic knowledge in a purposeful and creative manner during L1 production. Finally, some of the above-mentioned research studies dealing with RT point to motivational factors connected with the socio-political status of each language, which may determine the choice of a non-target language during target language production (Cruz-Ferreira 1999, Cedden/Onaran 2005).

One may ask whether RT observed in an L1 necessarily leads to L1 attrition. Native language attrition, as an effect of non-native language dominance, often accompanied by several social, political, economic, religious and educational factors (see e.g. Romaine 1989/1995, Seliger/Vago 1991, Schmid 2002, Schmid et al. 2004, Köpke et al. 2007), is a phenomenon which results in the distortion and even loss of an L1 by a given person (and a given community). However, the research studies conducted in the L2 contexts (e.g. Seliger/Vago 1991, Kecskés/Papp 2000:15–36, Schmid 2002, Cook 2003a, Schmid et al. 2004, Köpke et al. 2007, Gürel 2008) and the L3+ contexts (e.g. Williams/Hammarberg 1998, Cruz-Ferreira 1999, van Hell/Dijkstra 2002, Cedden/Onaran 2005, Sercu 2007, Schwartz et al. 2007, Chłopek 2009a, Cheung/Matthews/Tsang 2011) rather point to some kind of *restructuring* of the native language system, not to language loss. Jarvis (2003:82) even describes the possibility of 'an expanded L1 repertoire – i.e. where L1 rules and structures appear to have remained intact, having been augmented rather than replaced by L2 rules, structures and meanings.' Kecskés/Papp (2000) maintain that the development of a foreign language may positively influence mother tongue development. Thus, RT is not always an exclusively negative phenomenon. Some costs of non-native language appropriation, such as partial departure from monolingual L1 norms, are more than compensated for by the gained multi-language skills. It must also be kept in mind that CLI is an inherent and natural characteristic of the complex and dynamic multicompetence (Herdina/Jessner 2002). Kecskés/Papp (2000:ix) point out that a monolingual and a bi-/multilingual have different knowledge of their L1 and this must be simply accepted. As Laufer (2003:30) writes: 'Some L1 attrition […] is a small price to pay for achieving the ordinary state of mankind'.

Let us concentrate for a while on the difference between 'backward' (reverse) and 'forward' transfer. In their Revised Hierarchical Model of the mental lexicon, Kroll/Stewart (1994) propose that the interactions between the mental lexicons of unbalanced bilinguals occur both directly, i.e. on the lexical level, and indirectly, i.e. via conceptual representations. These interactions are asymmetrical: whereas

L1 – L2 interactions are usually conceptually mediated, L2 – L1 interactions are typically lexically mediated. This is because a dominant L1 has strong links with the conceptual system and a weaker L2 has loose links with the conceptual system (the links being determined by the number of language-specific conceptual representations, i.e. such representations which have been shaped by the semantics of a given language). Moreover, the lexical L2 – L1 connections are strengthened because L2 learners often translate new words directly into their L1.

Kroll/Stewart's (1994) hypothesis was confirmed by some researchers (Hatzidaki/Pothos 2008, Schoonbaert et al. 2009) and negated by others (de Groot/Dannenburg/van Hell 1994, Price/Green/von Studnitz 1999). It was further extended by Pavlenko (2009b) in her Modified Hierarchical Model. In agreement with Kroll/Stewart (ibid.), Pavlenko assumes the asymmetry of the interactions between two mental lexicons present in one mind, as well as the progression from lexical to conceptual mediation which accompanies L2 development. Pavlenko also shares other researchers' view that concepts may be different for or (partially) shared by two languages (de Groot 1992, Dong et al. 2005). If concepts are different, it means that monolingual speakers of the bilingual's languages have different concepts, even for seeming translation equivalents.[4] Shared concepts may be of two kinds: (1) monolingual speakers of each language have similar representations; (2) the bilingual developed idiosyncratic, converging representations for words from different languages. Pavlenko stresses that L2 appropriation does not only involve the development of a language system, but also means conceptual restructuring and the development of target-like (i.e. L2-specific) conceptual representations.

Summing up, RT is a phenomenon which does not necessarily lead to L1 attrition and can even contribute to the enrichment of the L1 system in situations of L1 maintenance. The higher the proficiency in a non-L1, the more conceptually-mediated RT occurrences may be expected. Several factors, such as non-target language proficiency and recency of use, seem to shape RT. However, it is not clear yet what are the most important factors that determine the intensity of RT and influence the kind of interlingual strategies applied by a multilingual person using their mother tongue.

# 3. The Present Study

## 3.1. Method

The analysed data come from the spoken production of one particular person, the present author's daughter Joanna. They were collected over a period of five years

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[4] E.g. such translation equivalents as *war* (English), *wojna* (Polish) and *Krieg* (German) have different connotations and thus different conceptual representations (the present author's example).

(2007–2011), when Joanna was 15–20 years old. At the beginning of this period, her languages were Polish (L1), English (L2) and German (L3). Before and during these five years Polish remained her dominant language. English and German were fluently mastered non-native languages (C1) at the beginning of 2007; at first German had the edge over English, but in 2008 the subjects' proficiency in English slightly surpassed her proficiency in German. In September 2007, Joanna began to learn her L4, French; this non-native language developed rather slowly and at the end of 2011 it reached a relatively low proficiency level (A2; Council of Europe 2001) (the assessment of proficiency was done informally by the present author).

The appropriation of Polish, English and German had taken place predominantly in a natural, communicative way. Joanna had acquired her L1 Polish from birth and remained in a Polish-speaking environment. English had been acquired since the age of three through television and films and through informal communication with her mother. During the data collection period, Joanna kept using English in a communicative way, e.g. to watch films, read books and use the Internet. From September 2007 to May 2010 she attended communicatively-oriented pre-IB and IB[5] classes. German had been acquired since the age of six through television, films and children's literature, and during frequent visits to Germany (including a one-year stay in this country at the age of 8–9). During the data collection period, Joanna still used it communicatively, mainly to watch films and to read books. Contrary to these three languages, French was learned in instructed school conditions, with no authentic interaction possibilities. After graduating from school, Joanna kept developing her language skills in a more communicative way, mainly by using French readers.

It must also be explained that before and during the data collection period the German language played a special role for Joanna's family. Namely, from the time when the whole family had lived in Germany for over one year (from 1999 to 2000), German served a kind of supporting function during communication in Polish (it was part of the family's Polish idiolect). This meant that German words and phrases were purposefully (and often jocularly) used in cases where Polish did not allow a concise or apt expression of a given concept, or when a German verbal representation was better available at the time of speaking, like in: *Mamy wszystkie cutaty?*, instead of *Mamy wszystkie składniki?* ('Do we have all ingredients?'; from German *Zutaten* – 'ingredients'; see also Chłopek 2009a). This fact undoubtedly strengthened Joanna's predisposition to seek support in the L3 while using the L1 and influenced the activation of the L3 system in her mind. However, the regular activation of English grew steadily after Joanna entered the pre-IB class in September 2007.

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[5] The *International Baccalaureate (IB)* Diploma Programme is a two-year secondary education programme, realised through content-based instruction in English (see http://www.ibo.org/).

The observations took place in the L1 linguistic and cultural environment, during non-structured conversations in Polish, in various informal settings. In most cases Joanna's interlocutor was her mother, i.e. the present author. It must be emphasised that since the subject's interlocutor knew all her languages (French at the beginning level, the remaining three languages fluently), there was no need for Joanna to suppress any of them. Each instance of non-normative Polish language use was recorded on paper by the author, along with any additional information (the topic of the conversation, the situational context, Joanna's comments, hesitations, emphasis put on certain words etc.). Only Joanna's 'original' language use was recorded (lexical borrowings present in the Polish language or quotations of other people's utterances were not included in the corpus). The time devoted to such observations was about 10 minutes daily. There were no special recording sessions, because this might bias the respondent towards or against particular language use; for the same reason the data were often written down a few minutes after a given non-normative lexical item was produced. The data were regularly transcribed using the Microsoft Office Word programme (no special coding was applied; see examples below). The instances of CLI were separated from the intralingual operations and grouped according to the source and kind of transfer.

Analysing data obtained from one subject may be perceived as limited research. However, a case study of this sort enables the researcher to understand the subject's intentions and thus to recognise sources and reasons of transfer. In this way, it allows an insight into the cognitive *processes* leading to the final, observable *product* (e.g. non-normative language use).

## 3.2. Classification of Instances of Reverse Transfer

There is no generally accepted classification of interlingual lexical operations. Different authors mention different effects of language contact; moreover, they do not use consistent terminology (see e.g. Romaine 1989/1995:124 and Chłopek 2011:ch.4.2). The classification applied for the present purposes is partly based on Ringbom (1987, 2007:78–88), Bouvy (2000) and Poplack (1980, 2001). The observed instances of lexical RT were grouped into six categories: code switching, nonce borrowing, semantic extension, semantic extension of a cognate, false friends phenomenon and loan translation (see Table 1 for examples). In line with Poplack (ibid.), **code switching** (CS) is understood as the alternate use of lexical units in two or more languages; a lexical item need not be adapted syntactically to the base language utterance or may require some syntactic adaptation. Only insertional CS is meant here, whereby an item in one language is inserted into an utterance in another language (Muysken 2000/2004:3). CS overlaps with Ringbom's (ibid.) category of code switches

and with Bouvy's (ibid.) category of direct borrowings. As Poplack (ibid.) explains, a **nonce-borrowing** (NB) is a non-target-language lexical item that has been integrated into the base language morpho-syntactically and often phonologically. NB corresponds to Ringbom's (ibid.) category of 'language coinages – hybrids, blends and relexifications' and Bouvy's (ibid.) category described as 'lexeme copying'. Like in Ringbom (ibid.), **semantic extension** (SE) is understood as the transfer of the meaning properties of a non-target item to a target element, typically occurring when the meanings of both lexical units partially overlap. If SE is prompted by formal cross-linguistic similarities, we speak of the **semantic extension of a cognate** (SEC). SEC is a borderline case between semantic extension and false friends. **False friends** (FF) is a phenomenon which occurs when there is no semantic similarity between two formally similar lexical items. Both SEC and FF would be classified by Ringbom (ibid.) as 'totally or partially deceptive cognates (false friends)'. As for Bouvy's (ibid.) classification, SEC is the same as her category of 'generalisation' and the category of FF overlaps with her category of 'lexeme matching'. Finally, in agreement with Ringbom (ibid.), **loan translation** (LT) is a calque or literal translation of a non-target lexical unit to the target language.[6]

Table 1. Examples of the six types of the observed RT occurrences

| Kind of transfer | Example | Correct L1 version | Intended meaning | Source of transfer |
|---|---|---|---|---|
| **Code switching (CS)** | *Jesteś bardzo* <u>*amüsant*</u>. | *Jesteś bardzo* <u>*zabawna*</u>. | *You are very* <u>*funny*</u>. | Syntactic adaptation of L3 adjective *amüsant* – 'funny' |
| **Nonce borrowing (NB)** | *Widzę, że* <u>*się*</u> <u>*endżojasz*</u>. | *Widzę, że* <u>*się*</u> <u>*dobrze bawisz*</u>. | *I can see you are* <u>*enjoying yourself*</u>. | Morphological, syntactic and phonological adaptation of L2 verb *enjoy yourself* |
| **Semantic extension (SE)** | *Kiedy ją* <u>*poznałam*</u> *[...]*. | *Kiedy* <u>*się*</u> *z nią* <u>*spotkałam*</u> *[...]*. | *When I* <u>*met*</u> *her [...]*. | Transfer of meaning of L2 verb *meet (sb)* (= L1 *spotkać się (z kimś)* – 'get together', *poznać (kogoś)* – 'get to know (sb)') onto L1 verb *poznać (kogoś)* |

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[6] There are some more differences between Bouvy's (2000) and the present author's classification of interlingual operations. Some instances of morpho-syntactic code-mixing enumerated by Bouvy (e.g. the use of *man* with the German meaning of 'you, one') would be classified by the present author as false friends and some instances of morpho-semantic code-mixing enumerated by her (e.g. *Zuid Europeans* for 'South Europeans') would be grouped with code switches by the present author. Moreover, spelling interference is a kind of lexical transfer for Bouvy, but not for the present author.

| Semantic extension of a cognate (SEC) | *Czerwony to jest twoja ulubiona <u>farba</u>.* | *Czerwony to jest twój ulubiony <u>kolor</u>.* | *Red is your favourite <u>colour</u>.* | Meaning of L3 noun *Farbe* (= L1 *farba* – 'paint', *kolor* – 'colour') assigned to L1 noun *farba* |
|---|---|---|---|---|
| False friends (FF) | <u>*Aktualnie*</u> *to nie jest prawda.* | <u>*W rzeczywistości*</u> *to nie jest prawda.* | <u>*Actually*</u> *this is not true.* | Meaning of L2 adverb *actually* ascribed to L1 adverb *aktualnie* – 'currently' |
| Loan translation (LT) | *To jest <u>wszystko inne niż</u> równo.* | *To <u>wcale nie</u> jest równo.* | *This is <u>not</u> straight <u>at all</u>.* | Literal translation of L3 phrase *alles andere als* – used to express emphasis |

## 3.3. Hypotheses

Several factors which may have influenced RT in Joanna's mind are similar for her L2 (English) and L3 (German). Both were fluent and active languages, acquired from an early age and used in authentic communicative contexts. Thus, both non-native languages were available for RT. Moreover, Joanna was most probably at such a stage of her L2 and L3 development when not only formal but also semantic cross-linguistic similarities are noticed (Ringbom 2007:8, 54–58). It is also possible that both languages had relatively strong links with the conceptual system (Pavlenko 2009b). On the other hand, there are two important differences between the L2 and the L3 use. Firstly, German played a supporting role for Joanna and her family. Secondly, Joanna had had frequent 'first-hand' contact with German native speakers and their culture. Taking these two differences into account, it was supposed that German rather than English might be better available to the subject during L1 production. It was also assumed that more L3-specific than L2-specific conceptual representations had developed, which might find reflection in the semantic transfer. The French L4 had a very different status than the other non-native languages. The beginning stages of language development, the classroom instruction contexts and a low level of activation were factors which did not create favourable conditions for RT to occur.

All three non-native languages are typologically distant from Joanna's L1 (though of course Polish has absorbed many words from these languages). Their morpho-syntactic structures, however, make it possible for English, German and French words to be integrated into Polish utterances.

Finally, Joanna's attitudes towards all her languages were positive, thus she was willing to use each of them.

Taking the above facts into consideration, it was hypothesised that:

(1) both the L2 and the L3 would be prominent sources of RT, but the L3 influences would be stronger;
(2) the RT would manifest itself mainly at the level of semantics;
(3) the most semantic influences would have their source in the L3.

## 3.4. Results and Discussion

The present corpus comprises 430 tokens (395 types) of lexical transfer from a non-native language to the mother tongue. The numbers of the various occurrences of RT are included in Table 2. As the figures show, the L2 – L1 transfer is slightly stronger than the L3 – L1 transfer and there is hardly any transfer from the L4. This outcome is a reflection of non-native language proficiency and recency of use. (As a matter of fact, German was the main source of RT in 2007, but beginning from 2008 the influence of English steadily became more prominent and in 2009 the L3 influences 'gave way' to L2 influences.) This disconfirms hypothesis one and shows that the contexts and methods of language appropriation may not be decisive factors for the intensity of RT.

Table 2. Amount of observed instances of reverse transfer from L2 (English), L3 (German), L2 and/or L3, and L4 (French) to the L1 (Polish)[7]

| Transfer category | Types vs tokens | Source of transfer | | | | Total |
|---|---|---|---|---|---|---|
| | | L2 | L3 | L2/L3 | L4 | |
| **CS** | **types/tokens** | 28/29 | 31/31 | 0/0 | 9/9 | **68/69** |
| | **% of tokens** | 6.7 | 7.2 | 0.0 | 2.1 | **16.0** |
| **NB** | **types/tokens** | 116/123 | 128/139 | 6/7 | 3/3 | **253/272** |
| | **% of tokens** | 28.6 | 32.3 | 1.6 | 0.7 | **63.3** |
| **SE** | **types/tokens** | 13/16 | 1/1 | 1/1 | 0/0 | **15/18** |
| | **% of tokens** | 3.7 | 0.2 | 0.2 | 0.0 | **4.2** |
| **SEC** | **types/tokens** | 5/5 | 1/1 | 2/3 | 0/0 | **8/9** |
| | **% of tokens** | 1.2 | 0.2 | 0.7 | 0.0 | **2.1** |
| **FF** | **types/tokens** | 13/14 | 1/1 | 0/0 | 0/0 | **14/15** |
| | **% of tokens** | 3.3 | 0.2 | 0.0 | 0.0 | **3.5** |
| **LT** | **types/tokens** | 24/28 | 12/18 | 1/1 | 0/0 | **37/47** |
| | **% of tokens** | 6.5 | 4.2 | 0.2 | 0.0 | **10.9** |
| **Total** | **types/tokens** | **199/215** | **174/191** | **10/12** | **12/12** | **395/430** |
| | **% of tokens** | **50.0** | **44.4** | **2.8** | **2.8** | **100.0** |

The ratio of types to tokens indicates that there are a few non-target lexical items which Joanna used more than once. Actually, most of them (18) were used only twice, but a few were used three times (4) or four times (3). It is possible that the latter items entered Joanna's Polish idiolect – if not for good, then for a certain period of time. An example of such recurring RT instances is the NB *endżojać się* (see Table 1).

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[7] Because of the 'one-respondent' kind of study and the relatively random method of data collection it was impossible to conduct any reliable statistical analysis.
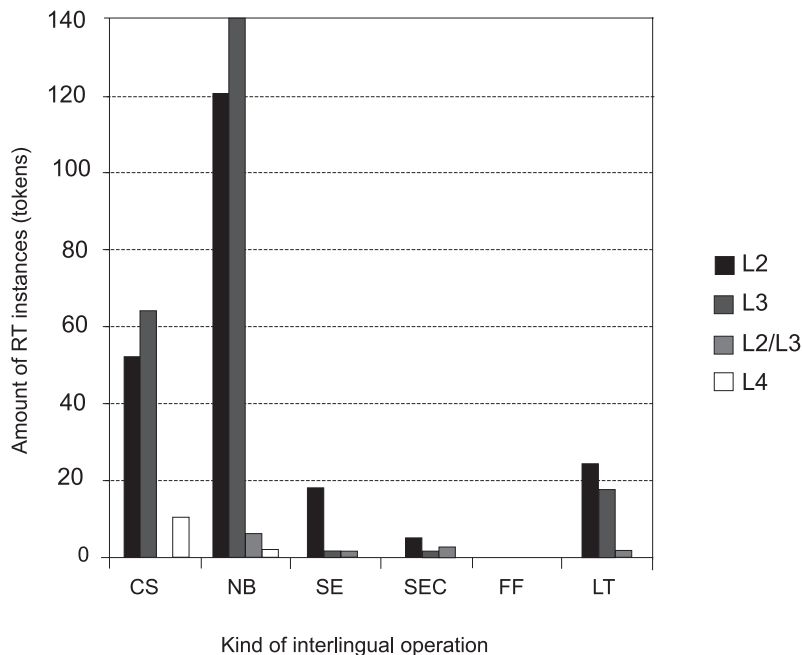
Graph 1. Amount of observed instances of RT from L2 (English), L3 (German), L2 and/ or L3, and L4 (French) to L1 (Polish)

The notably largest amount of RT occurrences can be found in the category of NB (272 tokens, 253 types). The second largest group of interlingual operations comprises the category of CS (69 tokens, 68 types). Ringbom (1987, 2007:78– 88) classifies NB and CS as instances of *form* transfer. His classification was (partially) adopted by the present author in a previous study (Chłopek, 2009b). However, both researchers analyse CLI in the production of L3 learners with insufficient target-language knowledge, resulting in (probably subconscious) transfer errors. Most of the instances of RT observed in the present study are very different from the transfer occurrences analysed in these two previous studies. In the case of bi-/multilinguals fluent in their languages, like the present respondent, both NB and CS are typical examples of purposeful manipulation with one's multicompetence – they mean 'picking up' a non-target form along with its meaning and 'adjusting' it flexibly and adequately to one's communicative intentions. Their use usually leads to semantic enrichment of one's utterances, and even of the language system (see also Ramírez 2003, and Pavlenko 2004). Thus, what took place (in most cases) in the present study is not compensation for imperfect language competences, resulting in form transfer, but rather an inventive and creative juggle with the languages that the respondent has at her disposal (see also Chłopek 2009a).

A qualitative analysis of the various instances of NB and CS whose source was either English or German suggests that there are five main reasons of such use of a fluently mastered non-native language:

(A) A non-target lexical item is (temporarily) better available, i.e. it has verbalised itself faster than a target word or phrase (the most available word phenomenon; Grosjean 1982:149–157) (especially examples 1, 3, 7 below).

(B) A non-target lexical unit is used because of the ease of expression, i.e. conciseness and economy of the expression of a given concept (examples 1, 3, 4, 7).

(C) A non-target lexical unit more aptly expresses a given concept than a target lexical unit (examples 1, 6, 7 and the examples of NB and CS in Table 1) or even offers the only possible means of verbalisation of a given conceptual representation (examples 4, 5, 10 and the example of NB in Table 1).

(D) A non-target lexical item is used because it better evokes the intended jocular effect (examples 1, 2, 5, 9).

(E) A non-target lexical item is used in order to place (emotional) emphasis on the content of the message (examples 4, where *stolzieren* expresses contempt, 8, where *faith in me* is meant ironically, and 10, where *Schnee von gestern* allows the speaker to underscore the remaining content of the utterance).

(1) *Starwamy czy kupujemy sobie coś do jedzenia?* (Correct: *Głodzimy się czy kupujemy sobie coś do jedzenia?* – 'Shall we starve or buy something to eat?' – NB, use of L2 verb *starve*.)

(2) *Bo inaczej jest pjuko-pędny!* (Correct: *Bo inaczej wywołuje wymioty!* – 'Because otherwise it makes you puke.' – NB, use of L2 noun *puke*.)

(3) *Chciałabym klajmać po górach.* (Correct: *Chciałabym wspinać się po górach/w górach*. – 'I'd like to climb the mountains.' – NB, use of L2 verb *climb*.)

(4) *Teraz po gimnazjum sztolcowała* […]. (Correct: *Teraz chodziła dumnie (?) po gimnazjum* […]. – 'Now she has stalked/strutted around the (middle) school [building].' – NB, use of L3 verb *stolzieren*.)

(5) *Idę glocać.* (Correct: *Idę gapić się w telewizor* (?). – 'I'm going to stare at the TV.' – NB, use of L3 verb *glotzen*.)

(6) *Czuję się mis.* (Correct: *Czuję się źle/podle*. – 'I'm feeling bad/wretched.' – NB, use of L3 adjective *mies*.)

(7) […] *moja magic wand*. (Correct: […] *moja czarodziejska różdżka*. – '[…] my magic wand.' – CS, use of L2 collocation *magic wand*.)

(8) *Cieszę się, że masz taką <u>faith in me</u>*. (Correct: *Cieszę się, że masz taką <u>wiarę we mnie</u>*. – 'I am glad that you have such <u>faith in me</u>.' – CS, use of L2 phrase *faith in me.*)

(9) *Dzień dobry, <u>Mitbewohner</u>!* (Correct: *Dzień dobry, <u>współlokatorzy</u>!* – 'Good morning, <u>flatmates</u>!' – CS, use of L3 noun *Mitbewohner.*)

(10) *To jest* […] *<u>Schnee von gestern</u>, bo ja już powiedziałam ten dowcip wczoraj*. (Correct: *To jest* […] *<u>(nieaktualna) historia</u> / <u>musztarda po obiedzie</u>* (?)*, bo ja już powiedziałam ten dowcip wczoraj*. – 'This is […] <u>water under the bridge</u>, because I told the joke yesterday.' – CS, use of L3 idiom *Schnee von gestern.*)

Among these five uses, the first one seems to be the most common reason of the RT from the L2 and the L3. However, the remaining ones are relatively frequent, too. When asked why she had not used a Polish equivalent of an English or German lexical item, Joanna would typically argue that it simply could not be applied in a given sentence. She would explain that a given L1 word did not 'sound' right or made a totally different sense than an L2/L3 word. When asked explicitly, she was always able to retrieve the Polish equivalent from memory.

The uses of NB and CS described above indicate that this kind of RT is predominantly semantically motivated. It is not certain to what extent this semantic transfer took place with the mediation of the conceptual system. A few instances of NB and CS may indicate access to non-target concepts (L2-/L3-specific or converging; see Pavlenko 2009b) – especially the use of items with no exact equivalents in Polish (examples 4, 5, 10 and the example of NB in Table 1) suggests that the activation of a non-target conceptual representation may have triggered the transfer process.

In 2009, L2- and L3-based occurrences of NB and CS of a totally different kind began to appear. These occurrences do accord with the definition of language switches and language coinages provided by Ringbom (1987, 2007:78–88) and adopted by Chłopek (2009b) – namely, they are effects of form transfer (see example 11 below). Altogether, only 11 such instances were observed. When discussing these cases, Joanna's first reaction was that of a surprise that her utterance was erroneous, even though eventually she was able to correct herself. These mistakes suggest that contrary to what is observed in the 'forward' transfer errors committed at different stages of language development (Ringbom 2007:8, 54–58), RT of form may follow (not precede) RT of meaning.

(11) *Myślałam o <u>żurnalistyce</u>*. (Correct: *Myślałam o <u>dziennikarstwie</u>*. – 'I thought about <u>journalism</u>.' – NB, use of L2 noun *journalism.*)

As Table 2 shows, there are 9 instances of CS into the L4 (French) and 3 occurrences of NB from this language (see example 12 below). Like most other

instances of NB and CS, these occurrences are effects of an interlingual semantic strategy. Their purpose is, however, different: Joanna admitted that she incorporated the French lexical items into her Polish speech in order to show off her newly gained knowledge.

(12) *Coś miałam do ciebie <u>parlać</u> i zapomniałam. <u>Quelque chose</u>.* (Correct: *Coś miałam do ciebie <u>powiedzieć</u> i zapomniałam. <u>Coś</u>.* – 'I wanted to <u>say</u> something to you and I forgot [what]. <u>Something</u>.' – NB, use of L4 verb *parler*; CS, use of L4 pronoun *quelque chose.*)

The fact that there are, in general, a lot more cases of NB than CS can be explained by the necessity to adapt non-target lexical units to the base L1, due to the morpho-syntactic characteristics of the Polish language, which is highly inflectional, and the difference between the articulation base of Polish sounds and the articulation bases of English, German and French sounds.

The third largest group of RT instances comprises the category of loan translation, represented by 47 occurrences (37 types) (Table 2). LT is typically semantically motivated (Ringbom 1987, 2007:78–88, Chłopek 2009b). Also the instances of LT of L2 and L3 lexical units observed in the present study are cases of semantic transfer (see examples 13–15 below and the example in Table 1). However, unlike the instances of semantically-motivated NB and CS, the LTs are most probably cases of negative transfer. When asked to correct herself, Joanna typically seemed surprised that her utterance was erroneous. It seems that some LT occurrences might result from the activation of non-target concepts, since some of the translated L2 and L3 phrases have no exact L1 lexical equivalents (examples 14–15).

(13) […] *robić to <u>w publiczności</u>.* (Correct: […] *robić to <u>w miejscu publicznym</u>.* – '[…] to do it <u>in public</u>.' – calque of L2 *in public.*)

(14) *<u>Zgub się!</u>* (Correct: (e.g.) *<u>Idź sobie!</u>/<u>Spadaj!</u>* (?) – '<u>Get lost</u>!' – calque of L2 *get lost*[8].)

(15) *To <u>jeszcze długo nie</u> jest Magda.* (Correct: *Do Magdy [jej] <u>jeszcze dużo brakuje</u>.* (?) – '<u>There are still a lot of differences</u> between [her and] Magda.' – calque of L3 *noch lange nicht* – 'still not' [emphasized].)

The remaining three kinds of operations, for which relatively few transfer occurrences were observed, are: SE – meaning transfer, SEC – form and meaning transfer and FF – form transfer (Ringbom 1987, 2007:78–88, Chłopek 2009b). These operations are usually instances of incorrect language use, typical of bi-/multilinguals who are less proficient in the target language than the present respondent. It is worth noting, however, that from 2009 the number of these RT occurrences slightly

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[8] The command was directed at the researcher's dog, not at the researcher!

rose. This means that Joanna's command of her L1 probably weakened with time under the influence of other languages. The slight increase in the number of FF supports the above-mentioned hypothesis that RT of form may follow RT of meaning.

As the above analysis shows, the RT observed in the present study is predominantly semantic, which confirms hypothesis two. This result is in accordance with Latkowska's (2006) observation of her subjects' production in their L1, which was also characterised by semantically motivated transfer from their L2. The outcomes of the present study also find confirmation in the results of a previous study, which constitute a kind of a mirror image of the present results. The study (Chłopek 2009b) was conducted with Polish learners of L2 German and L3 English. In the written production in their imperfectly mastered L3, these subjects made a lot of interlingual transfer errors. The largest group of errors included various instances of LT; there were several instances of SE, SEC and FF; instances of CS and NB comprised the smallest group.

Calculating all the instances of form transfer (including FF and the erroneous CS and NB mentioned above) and all the instances of semantic transfer (including the remaining RT instances, except for SEC) from the L2 and L3, the following result is obtained: 21 tokens (19 types) of form transfer versus 189 tokens (175 types) of semantic transfer from the L2; 4 tokens (3 types) of form transfer versus 186 tokens (170 types) of semantic transfer from the L3. Thus, the semantic influences from these two languages are comparable, which disconfirms hypothesis three. It must be concluded that having appropriated a non-L1 in authentic conditions does not make it the main source of semantic RT – a high level of proficiency is probably enough to trigger meaning transfer.

## 4. Summary

The present study was conducted with a quadrilingual person with Polish as an L1, English as an L2, German as an L3 and French as an L4. Occurrences of reverse transfer in her L1 oral production were analysed.

Hypothesis one: As anticipated, the two fluent and active non-native languages (L2 and L3) were important sources of RT, but contrary to expectations L3 influences were not stronger. This indicates the importance of non-target language proficiency and recency of use – but not contexts and methods of appropriation – for the intensity of RT.

Hypothesis two: As expected, the RT manifested itself mainly at the level of semantics. The analysis of the RT occurrences shows that a multilingual may apply various interlingual strategies allowing them to express a variety of concepts, to achieve specific communicative intentions and to compensate for temporary lexical retrieval problems. Additionally, the results suggest that RT of form may follow RT of meaning.

Hypothesis three: Contrary to expectations, the L3 was not the main source of semantic RT. This indicates that language proficiency – and not the authenticity of language appropriation – is the main factor triggering semantic transfer.

According to the models of the mental lexicon (Kroll/Stewart 1994, Pavlenko 2009b), RT is lexically driven at beginning stages of L2 development but may involve the mediation of the conceptual system at later stages. It is impossible to decide how much of the semantic RT observed in the present study was conceptually mediated. However, a few instances of the RT apparently induced by the lack of an appropriate L1 lexical representation suggest that the activation of some non-target concepts may have been at play.

In a nutshell, the mother tongue of a bi-/multilingual, even if it remains the dominant language, may be (temporarily) influenced by each non-native language present in the mind. The intensity and kind of RT seems to depend on the mastery and activation of the non-native languages. In order to confirm these findings, the present case study should be replicated in other similar contexts.

## Acknowledgments

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