Studies on lexical inferencing and inter comprehension of Italian as a foreign language in a Swedish setting

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Abstract

This dissertation is a collection of three studies in which the main focus is on the role of Swedish L1 speakers' background languages for the comprehension of written Italian at a lexical level. Italian is one of the foreign languages that Swedish pupils in upper secondary school can choose to study. Previous research on third language acquisition and the role of the background languages in the Swedish context has mainly concerned oral production. With the studies in this thesis we intend to contribute to research on third language acquisition regarding comprehension of Italian both as an L3 and an unknown language. The first study, written in Italian, is a licenciate thesis. It examines the lexical inferencing procedures of 12 upper secondary school pupils studying Italian as a beginner's language when they are trying to translate as much as possible of an Italian text into Swedish by means of think-aloud protocols. The second study is an intercomprehension study, which means that the three participants did not have any knowledge of Italian. The role of the participants' background languages when translating Italian text into Swedish was examined, with focus on which language(s) were mainly activated and used and the use of which language(s) led to the highest success rate. As in the first study, the method used was think-aloud protocols. The third study had 60 participants divided into three groups. Neither of the participants had any knowledge of Italian. One group translated, in writing, a short Italian text into L2 English, the second group into L3 Spanish and the third into L3 French. The results of the three studies indicate that all the languages that the participants know are to some extent activated and used for the comprehension of Italian. Furthermore, it appears that the language into which the participants were asked to translate had an impact on the activation of the background languages. If they were asked to translate into another foreign language instead of Swedish, Swedish was not activated and used to the same extent.

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Study I

Study II

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List of studies

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Study II: Smidfelt, L. (2018). An intercomprehension study of multilingual Swedish L1 speakers reading and decoding words in text in Italian, an unknown language. *Lingua*, 204, 62-77.

Study III: Smidfelt, L. & van de Weijer, J. (2019). Prior language knowledge and intercomprehension at the first encounter of Italian as an additional language. A translation task. Accepted for publication in *Moderna Språk*, Vol. 113, No. 1, 2019.

Abbreviations

CEFR	Common European Framework of Reference
GERS	Gemensam europeisk referensram för språk
L1	First language
L2	Second language
L3	Third language
SLA	Second language acquisition
TLA	Third language acquisition
TAP	Think-aloud protocol

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Lund, April 2019

1. Introduction

> **per cominciare** ‘‘för att börja’’ **cominciare** som commence (English) eller comenzar (Spanish)
>
> ‘**per cominciare** (to begin) ‘‘to begin’’ **cominciare** as commence (English) or comenzar’ (Spanish) (From a think-aloud protocol of one of the participants)

During many years of teaching English and Italian in upper secondary school, I observed that a majority of the pupils learning Italian as an L3 often used their previously learned languages in their production of Italian, both written and oral, whenever there was a gap in their lexical knowledge. However, in comprehension of written text the pupils were often not aware of the possibilities they had to infer the meaning of unknown words with help of the languages they already had knowledge of. This was how my interest in investigating the role of the background languages for the comprehension of Italian as an L3 began. This dissertation thesis is a collection of three studies, one Licenciate thesis in Italian and two papers in English. The overall purpose of the thesis is to examine the role that the previously acquired languages of Swedish L1 speakers play when encountering unknown words in context in Italian, and to deepen the understanding of how the different languages a learner has knowledge of interplay when inferring the meaning of unknown words. The use of additional strategies is also examined, such as the use of the context of the text, general world knowledge and intralingual strategies.

In Swedish schools, English is the first foreign language that the pupils learn. The majority of the pupils also study an additional foreign language later on in elementary and secondary school, mainly German, Spanish or French (Henry, 2016; Österberg & Bardel, 2016). Italian is a foreign

language that usually can be chosen at beginners' level in upper secondary school. This means that the pupils who choose to study Italian in upper secondary school, in most cases, have studied English and another foreign language when they start learning Italian. It is also common that pupils have more than one L1, which is part of their linguistic repertoire. Since Swedish pupils in upper secondary school have this multilingual background when they begin to study Italian, it is highly relevant to investigate the role that the previously acquired languages has for learning another foreign language, in this case Italian, and in particular for the comprehension of a foreign language. Previous research on transfer and cross-linguistic influence often focuses on production and less research, in the Swedish context at least, focuses on comprehension of foreign languages, which indicates a need for more research on the use of the background languages in comprehension of Italian, in a Swedish context. With the studies in this thesis we intend to contribute to the research on Swedish speakers' use of their background languages in comprehension of Italian as an L3 or as an unknown language. In study I, conducted in February 2014, the participants were 12 upper secondary school pupils who were studying Italian at beginners' level at the time of data collection. The participants in study II, conducted in 2017, were three university students who had never studied Italian. Finally, in study III, conducted in 2018, 60 upper secondary school pupils who had never studied Italian participated. Hence, in study I the participants had knowledge of Italian, even if it was limited, and in the following two studies the participants had not learned Italian at all. All three studies concern the comprehension of written Italian at a lexical level and the role of the different background languages (or possibly other strategies) of the participants.

In the Swedish context, multilingualism is emphasized by the Swedish National Agency for Education. The following passage is from the Swedish curriculum for upper secondary school (the section regarding foreign languages, for instance, Italian, German, Spanish and French) in which this multilingual approach is expressed:

> Language teaching should stimulate the pupils' curiosity about languages and their culture and it should also provide opportunities for pupils to develop multilingualism, in which knowledge of different languages supports each

> other. In addition, language teaching should contribute to pupils' further development of linguistic awareness and knowledge of how language learning takes place at school as well as outside the formal educational environment. (The Swedish National Agency for Education, (Skolverket) "Moderna språk - Ämnets syfte", my translation)

Furthermore, in the Common European Framework of Reference (CEFR), the importance of having knowledge of more than one foreign language is expressed as follows:

> Beyond this, the plurilingual approach emphasises the fact that as an individual person's experience of language in its cultural contexts expands, from the language of the home to that of society at large and then to the languages of other peoples (whether learnt at school or college, or by direct experience), he or she does not keep these languages and cultures in strictly separated mental compartments, but rather builds up a communicative competence to which all knowledge and experience of language contributes and in which languages interrelate and interact. (……) or a person may call upon the knowledge of a number of languages to make sense of a text, written or even spoken, in a previously 'unknown' language, recognising words from a common international store in a new guise. (Council of Europe, Common European Framework of Reference, 2007, p.4)

As we can understand from these two documents, multilingualism and the interaction between the languages a learner has knowledge of, or even unknown languages, are considered highly relevant, both in a Swedish and a European context. In the present thesis, multilingualism is referred to as knowledge and use of three or more languages, at an individual level (McArthur, 1992, Kemp, 2009).

This thesis is divided into two parts and is organized as follows: The first part is the introductory chapter and section 2 the theoretical background and previous research relevant to the issues dealt with in the studies are presented. In section 3 the methodology and the materials used in the studies are presented and discussed. In section 4 the three studies are summarized and finally, in section 5 the results of the studies are discussed and some

pedagogical implications and suggestions for future research are provided. The second part of the thesis consists of the three studies presented in the order that they were conducted and written.

2. Theoretical background and previous research

2.1 Third language acquisition

Second language acquisition (SLA) has for many years focused on the role that the mother tongue (L1) has for the acquisition of a second language (L2). However, it is often the case that a learner has knowledge of more than one language when acquiring another foreign language. This, and the fact that multilingualism is very common among the world's population, has contributed to an increasing interest in third language acquisition (TLA) (De Angelis, 2007; Cenoz, 2013; Hammarberg, 2009, 2016). As Hammarberg (2009) suggests, "humans are potentially multilingual by nature" (p. 2). De Angelis (2007) points out that it is also clear that a multilingual learner can draw upon a vast amount of linguistic information in production and reception as compared to a monolingual or bilingual learner. Furthermore, De Angelis also states that more than one language can be the learner's source of information when speaking, for instance, and this often leads to combined cross-linguistic influence since the learner can draw on multiple background languages when there is a gap in the target language. Hence, the more languages a learner has knowledge of, the more possibilities there are of cross-linguistic influence and this also makes research on TLA potentially more complex than research on SLA (Cenoz, 2001). Cross-linguistic influence, or transfer, has been the focus of research on SLA and TLA for decades and is defined by Odlin (1989) as:

> (…..) the influence resulting from similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired (p. 27).

With regard to the definition of the term L3, different researchers use different definitions. One way to define L2, L3, L4 etc., is in chronological order, i.e. the L1 is the first language the learner has acquired, the L2 the second, the L3 the third, etc. However, according to Hammarberg (2009), a chronological definition is problematic since a learner does not always acquire languages in a chronological order and a learner might acquire more than one language simultaneously. According to Hammarberg (2016) "A third language (L3) is a non-native language that is acquired or used in a situation in which the person already has knowledge of one or more L2s along side of one or more L1s" (p. 38, my translation). In other words, this stresses that the L3 is not necessarily the third language acquired in a chronological order. De Angelis (2007) refers to *third or additional languages* and according to this definition the L3(s) are all the languages acquired after the L1 and L2, and in this case the L2 can only refer to one language and not many as in Hammarberg's definition. For the studies included in this thesis Hammarberg's (2016) definition of an L3 is used since the participants have studied a various number of foreign languages and some of the participants also have an additional L1.

Cross-linguistic influence in TLA has mainly been investigated in the context of language production, in particular oral production (e.g. Williams & Hammarberg, 1998; Cenoz, 2001; Lindqvist, 2009, 2010; Lindqvist & Bardel, 2014). A few studies with relevance to the languages included in this thesis are briefly presented here. Williams & Hammarberg's (1998) case study showed that the L1 and the L2 played different roles in the oral production of Swedish as an L3. English L1 played an instrumental role, which means that it was used for eliciting words from the interlocutor and to comment on the production, on the other hand German L2 played a supplier role, i.e. it seemed to be used more subconsciously with no evident communicative aim. Moreover, Lindqvist (2009) investigated how, and to what degree, Swedish learners' (with different proficiency levels of French) L1 and L2(s) influenced spoken French as an L3. The study also included six learners of French with different L1s, Swedish, Spanish and English. The results of the first part of the study showed that the beginners produced the highest number of cross-linguistic lexemes and the high proficiency learners the lowest. Furthermore, the results showed that Swedish L1 was the most important source of cross-linguistic influence for all groups. In the second part of the study Williams & Hammarberg's (1998) categorisation of the role

of the background languages was applied. The results showed that English L1 and Swedish, as L1 or L2, mainly played an instrumental role, whereas the activation of a supplier language varied more and was less evident. Lindqvist & Bardel (2014) reported on two case studies related to the role of the proficiency level of the background languages and typological proximity between the languages involved in L3 oral production. In the first case study, previously reported in Bardel & Lindqvist (2007), the learner had Swedish as L1, English, French and Spanish as L2s and the target language was Italian as an L3. In the second case study the learner had Swedish and Italian as L1s and English and French as L2s and the target language was Spanish as an L3. The results of the two studies indicated that typology and proficiency factors play an important role for cross-linguistic influence, but in different ways. In the first study low-proficiency Spanish was used in the beginning of the learning process of Italian and mainly for code-switches of function words, while high-proficiency French was used mainly for word construction attempts. In the second study Italian L1 was utilized both for code-switches and word construction attempts. According to Bardel & Lindqvist, these results suggest that a high-proficiency background language could be activated for both purposes if it is similar enough to the target language.

Moreover, the interaction and the interconnectedness between the background languages in the mind of a multilingual learner, especially at the lexical level, have been investigated to a great extent during the last decades. In previous research there is evidence of both integrated and separate lexicons in the mind of a multilingual which might depend on different factors, such as how many languages a learner knows and whether the learner is engaged in production or comprehension processes (De Angelis, 2007). De Bot (2004) proposes that languages differ in their level of activation, depending on the "amount of contact and use, level of proficiency reached, maybe method of instruction, age of acquisition and many more variables" (p. 26). Furthermore, Green (1986) suggests that languages can be activated to various degrees and are always in one of these three states: *selected* – controlling speech output; *active* – playing a role in on-going processing and *dormant* – in long-term memory without effects on on-going processing. Regarding the relative state of activation of a speaker's languages, Grosjean (2001), with his language mode model, proposes that "Language mode is the state of activation of the bilingual's languages and

language processing mechanisms at a given point in time" (p.3). Additionally, the state of activation of the languages can depend on different factors, such as to whom the person is speaking or listening, the topic and the situation.

Hufeisen (2005) discusses cognitive factors that might influence the acquisition of languages, such as the general capacity of learning a language, the age and the environment in which the language is learned. For the acquisition of an L2 or L3 it is also a matter of motivation, learning experience, the learning strategies of the learner and general linguistic knowledge. Furthermore, previous research on SLA and TLA has established different factors that contribute to the activation of the background languages (e.g. Williams & Hammarberg, 1998; De Angelis & Selinker, 2001; Hammarberg, 2016). The most relevant for our studies are:

- *recency* – to what extent the language has been used, i.e. the more recently a language has been used, the more likely it is that it will be a source for transfer. As Hammarberg (2001) points out "L2 is activated more easily if the learner has used it recently and thus maintained easy access to it" (p. 23). De Bot (2004) suggests that recency of use may lead to higher levels of activation of a cross-linguistic item.
- *proficiency* – the proficiency level of the learner's background language(s) and of the target language (Ringbom, 2001; Bardel & Linqvist, 2007; Lindqvist, 2009). Some studies have shown that learners with a lower proficiency level in the target language rely more on their L1 in transfer compared to learners with a higher proficiency level (Ringbom, 1987; Möhle, 1989).
- *typological proximity* or *psychotypologigal proximity*– the first referring to the actual degree of similarity between the background languages and the L3 and the second to the perceived (by the learner) similarities between the languages (Kellerman, 1983). Learners of a third language appear to transfer more from a language that is typologically close to the target language, or the language that

> the learners perceive as close to the target language (Bardel & Lindqvist, 2007; Lindqvist, 2015).

There are different ways of approaching research on TLA and there are several factors that might affect transfer from previously acquired languages, such as language mode, recency of use, proficiency level and (psycho)typology, as we have discussed in the present section. Furthermore, as was pointed out previously, transfer in TLA has mainly been investigated in the context of oral language production. However, we are interested in finding out how the previously acquired languages affect the comprehension of a third language, either as a beginners' language or an unknown language, as in research on intercomprehension, which will be discussed in the following section.

2.2 Intercomprehension

> Intercomprehension refers to receptive multilingualism between related languages, making use of language family relations, i.e., understanding an unknown language against the background of the L1 (and/or a "bridge language"), which has a sufficient amount of vocabulary and grammatical structures in common with the unknown language. (Möller & Zeevaert, 2015, p. 314)

The term intercomprehension in this thesis refers to what Möller & Zeevaert (2015) point out in the quote above, i.e. receptive multilingualism in the sense of comprehension of an unknown language with help of the languages a learner knows (here referred to as "bridge language"), including the L1. Intercomprehension or receptive multilingualism can also refer to communication between interlocutors who use their respective L1s while speaking to each other (ten Thije & Zeevaert, 2007). Nevertheless, as Möller & Zeevaert (2015) argue, there is reason to separate the understanding of written and spoken language. In listening there is limited time available for processing the input and usually there is only one attempt possible for processing. Differently, in reading a text there is usually no time constraints and it is possible to go back and forward in the text and read the text several times to improve understanding.

The interest in intercomprehension has increased in recent years (Van Bezooijen & Gooskens, 2007; ten Thije & Zeevaert, 2007; Marx, 2011; Möller & Zeevaert, 2015). There are examples of larger intercomprehension projects involving the Romance language family, for instance *EuroComRom* (Klein & Stegmann 2000) and *EuRom5* (Bonvino et al., 2011) and in the Germanic languages, *EuroComGerm* (Hufeisen & Marx 2007), with the purpose of increasing the possibilities of intercomprehension and communication between closely related languages. There are also examples of recent studies which deal with intercomprehension and the understanding of unknown languages in different combinations, for example the study by Mieszkowska & Otwinowska-Kasztelanic (2015) who examined how Polish L1 speakers decoded Danish text; the study by Swarte, Schüppert & Gooskens (2015) in which they examined how Dutch L1 learners of German translated Danish words; Marx (2011) investigated German L1 speakers who read a short text in different unknown Germanic languages (Danish, Dutch, Icelandic, Norwegian, or Swedish) and answered questions on content and structure (see study II, pp. 63-64 for a further discussion of these studies). Möller & Zeevaert (2015) examined both cognate recognition of isolated words in unknown Germanic languages by German L1 speakers and cognate recognition in context by means of decoding a Swedish text (an unknown language for the participants). Furthermore, Möller & Zeevaert used think-aloud protocols to investigate the thought processes of the participants during the word recognition tasks and the text decoding. The results of the think-aloud protocols showed that nearly all the participants read the unknown words aloud in all the tasks, concentrating on the articulation process. Additionally, it seemed as though semantic connections between words played a role even in the recognition of isolated words and that different associations were made, sometimes subconsciously and without rational explanation. They also argue that in text decoding the role of semantics is crucial, even dominating, in an unknown language, and when the participants have a clear idea of the context of the text they accept solutions with little similarity between the word in the text and the cognates in question.

As we will see in section 4, in particular study II and III in the present thesis are designed with an intercomprehension approach with focus on comprehension of Italian as an unknown language.

2.3 Lexical inferencing

> The procedures of lexical inferencing involve making informed guesses as to the meaning of a word in the light of all available linguistic cues in combination with the learner's general knowledge of the world, her awareness of the context and her relevant linguistic knowledge (Haastrup, 1991, p.13).

Vocabulary is a crucial component in the learning process of a foreign language (Milton, 2009) and there is a general consensus among second language researchers that lexical inferencing is one of the most important strategies foreign language learners use while encountering unknown words in a context (Fraser, 1999; Bengeleil & Paribakht, 2004; Ringbom, 2007; Hamada). A common division of lexical inferencing strategies are the three general strategies, *interlingual inferencing, intralingual inferencing* and *contextual inferencing* (Carton, 1971; Haastrup, 1991), and these were also the categorisations used in study I.

The interlingual inferences are based on the learner's L1, or other languages known by the learner. The inferences could for instance be based on cognate words in the different languages the learner has knowledge of. If the languages that the learner knows are typologically close to the target language (TL) this will facilitate the inferencing process, as Ringbom (2007) points out:

> Learning a TL perceived to be similar to the L1 means finding that target language texts have a number of items that at least roughly correspond in form and function/meaning to items in the L1. Simplified cross-linguistic one-to-one relationships can then be established between the items, contributing to at least an approximate understanding of text (p.10).

The success of the interlingual inferencing process can also depend on the languages involved, the number of cognates in the languages and the type of text that the learner reads.

The intralingual inferences are based on the knowledge of, for instance, word structures within the target language. The inference could in this case be based on morphological knowledge of prefixes, suffixes or the stem of the target word, or the knowledge of different grammatical categories, for example if the learner knows a noun in the target language, the verb might be similar and hence possible to infer.

The contextual inferences (sometimes referred to as *extralinguistic* or *pragmatic cues*) can be divided into different levels. On a phrasal level the learner might know the words that surround the target word and hence be able to infer the meaning of the word. On a more general text level the learner might be familiar with the topic of the text and this could help inferring the unknown words. On an even more general level it is possible that the learner uses his/her world knowledge. Clarke & Nation (1980) gives the following example: "Typhoon Vera killed or injured 28 people and *crippled* the seaport city of Kellung" (p.212). According to Clarke & Nation the reader should be able to infer at least the general meaning of the word *crippled* as something negative with the help of the surrounding words, for instance *thyphoon*, which in general leads to negative consequences. Previous studies have shown that the use of context for inferring the meaning of unknown words is crucial. For instance, Haastrup (1991) found that learners at a low proficiency level more often use the context at the phrasal level and learners at a higher proficiency level use the general context, such as the topic of the text, to a higher degree.

The use of interlingual, intralingual and contextual strategies is also referred to as bottom-up and top-down strategies. When a learner uses bottom-up strategies the focus is mainly on the lexical level, i.e. the learner infers individual words without the aid of the context. Top-down strategies, on the other hand, refer to the use of the context, either the topic of the text or world knowledge cues (Haastrup, 1991). According to, for instance Ringbom (2007) and Haastrup (1991), learners who have a higher level of proficiency in the target language are more successful at combining these two strategies, while learners at lower proficiency levels tend to rely on one of the two.

Lexical inferencing processes have been studied extensively during the last decades and the majority of the studies have been conducted on English L2 as the target language, with learners with different L1s (cfr. Haastrup, 1991; Fraser, 1999; Nassaji, 2003; Paribakht, 2005; Hamada, 2009; Alavi & Kaivanpanah, 2009; Wang, 2011; Kaivanpanah & Moghaddam, 2012). There are fewer studies on other target languages than English, however some examples are the study by Peyer, Kasier & Berthele (2010) in which the target language is German as L3, the study by Soria (2011) with the target language Ilokano and the study by Comer (2012), with Russian as target language. Furthermore, researchers have also investigated the relationships between different factors that influence the lexical inferencing processes. Examples of these are the relationship between L2 proficiency and L2 lexical inferencing success (Haastrup, 1991; Fraser, 1999); the relationship between L2 reading proficiency and L2 lexical inferencing (Bengeleil & Paribakht, 2004); the relationship between depth of vocabulary knowledge and successful use of lexical inferencing strategies; the relationship between the retention of word meanings inferred from context and the lexical inferencing strategies used by the learners (Hu & Nassaji, 2012). In several of these studies, models based on the actual strategies that the participants use were created to categorise the inferencing strategies. Two examples are presented below (Nassaji, 2003; Bengeleil & Paribakht, 2004). In study I in this thesis parts of the categorisations are based on these models.

Knowledge source

1. *Grammatical knowledge* (e.g., use of grammatical functions or syntactic categories, like verbs, adjectives, or adverbs)
2. *Morphological knowledge* (e.g., use of word formation, structure, derivations, inflections, word stems, suffixes, prefixes)
3. *World knowledge* (e.g., knowledge of content or topic that goes beyond the text)
4. *L1 knowledge* (e.g., using L1 to help determine the meaning of a word, like translating or finding a cognate)
5. *Discourse knowledge* (e.g., knowledge about the relation between or within sentences and the devices that make connections between different parts of the text)

Strategy

1. *Repeating* (e.g., repeating any portion of the text, like words, phrases, or a *sentence)*
2. *Verifying* (e.g., checking the inferred meaning against the wider context)
3. *Self-inquiry* (e.g., self-questioning about the text, words, or inferred meaning)
4. *Analyzing* (e.g., inferring by means of analyzing a word into different parts)
5. *Monitoring* (e.g., display of conscious awareness of the problem or its level of ease/difficulty)
6. *Analogy* (e.g., inferring by means of sound or form similarity with (an)other word(s))

(Nassaji, 2003, pp. 655-656)

I.Linguistic sources

A. Intralingual sources

1. Target word level

a. word morphology

b. homonymy

c. word association

2. Sentence level

a. sentence meaning

b. syntagmatic relations

c. paradigmatic relations

d. grammar

e. punctuation

3. Discourse level

a. discourse meaning

b. formal schemata

B. Interlingual sources

1. Lexical knowledge

2. Word collocation

II.Non-linguistic sources

A. Knowledge of topic

B. Knowledge of medical terms

(Bengeleil & Paribakht, 2004, p. 231)

The two models presented above are relevant for parts of study I in this thesis. Since the participants in study I had studied Italian, as compared to the participants in study II and III who had not, they were able to use a wider range of strategies. However, the participants in Nassaji's and Bengeleil's & Paribakht's studies had a high proficiency level of the target language and were able to use different kinds of strategies to a higher extent, and the models were created based on the strategies that the participants actually used. That was the case also in study I in this thesis, the strategies were categorised according to what the participants actually stated in the think-aloud protocols. Apart from the three main strategies a few participants also used *repeating*, i.e. the target word was repeated several times before an inference was made, and *self-inquiry*, i.e. the participant posed a question to him/herself while trying to infer the word (see Nassaji, 2003; Smidfelt, 2015). The two models are less relevant for study II and III in this thesis since those participants had no knowledge of Italian and hence, for the majority of the inferences, they used the knowledge of their background languages. We can conclude that for lexical inferencing studies it is difficult to base the categorisation of the inferences on one model in particular, because the strategies that the participants are able to use depend on many factors, such as the proficiency level of the target language and the background languages and the languages involved in the study.

2.4 Cognates

In the three studies included in the present thesis the role of cognates in the different languages known by the participants is an important factor for the inferences of the unknown words. A general definition of cognate words is that they are words that share orthographic, semantic and phonological similarities, and this is also the definition used in the studies in this thesis. Research has shown that when, for instance, reading in an unknown language, as is the case in study II and III, the number of cognates in the languages involved is closely linked to how much of the text a learner can comprehend (Heeringa et al., 2013; Möller & Zeevaert, 2015). Furthermore, learners search for similarities between the languages they have knowledge of when acquiring a new language or trying to comprehend unknown words (Ringbom, 1987; Jessner, 1999; Ringbom, 2007). Hall et al. (2009) discuss different types of cognates, i.e. "true cognates" are words that have the same

meaning, such as *fruta* in Spanish and *fruit* in English, "indirect cognates" such as *librería* (bookshop) in Spanish and *library* in English. Furthermore, there are "false friends", "interlingual homographs" or "deceptive cognates" (e.g. Ringbom, 2001), which means that the words do not share meaning, for instance *tuna* (prickly pear) in Spanish and *tuna* in English. Cognates in general, and also false friends, play a role in both production and reception. Bardel (2015) presents an example of how a false friend leads to an erroneous use of a word in production, based on the cognateness of the Italian word *libreria* (bookshelf) and the English word *library*: "Ci sono libri italiani nella *libreria*" ("There are Italian books in the bookshelf") (p.118). The speaker means to refer to the library and not a bookshelf. In study II in this thesis there are several examples of false friends leading to an erroneous translation of the Italian target words. One example from the participant who had Spanish as L3 is (see example 15, p. 69 in study II): "*matto* möjligtvis från *matar*, 'att döda'" (*matto* (crazy) possibly from *matar*, ''to kill''). The Italian word *matto*, which means "crazy", is here incorrectly perceived as a cognate of the Spanish verb *matar*, probably because of the formal similarities between the words.

Several previous studies have examined the role of cognates in word recognition and the results suggest that a multilingual speaker's lexicons are activated in parallel and support a non-selective view of lexical access (de Groot, Delmar & Lupker, 2000; Dijkstra & van Hell, 2003; Lemhöfer, Dijkstra & Michel, 2004; Szubko-Sitarek, 2011; Vanhove & Berthele, 2015). However, there is evidence that the level of activation of the background languages may be task specific and depend of whether the task concerns production or reception. In a recent study by Tytus (2018) for instance, the results of a picture-naming task seemed to suggest that the languages known by the participants were not activated to the same extent.

In summary, in the theoretical background we have discussed concepts relevant to the studies in this thesis. Our three studies concern Italian as a target language, both as an L3 and an unknown language. The main aim of the studies was to examine the role of the background languages for the comprehension of Italian. Furthermore, we investigated whether the level of activation and use of the languages might depend on the proficiency level of the background languages, typological or psychotypological proximity and

the type of task devised, i.e. if the level of activation of the background languages would change depending on what language the participants translated into. In the next section we will present the methodology that underlies the three studies, in section 4 the studies are summarized and in section 5 the results are discussed.

3. Methodology

In study I and study II the analysis of the data was mainly qualitative, both because the number of participants was quite low and because we were interested in finding out, not only if and which words the participants were able to infer, but how they were able to infer the meaning of the words. Therefore, the method used in the first two studies is think-aloud protocols (TAPs). This means that the participants were asked to verbalize their thoughts while they were performing the task and this is a common method used in both intercomprehension and lexical inferencing studies. A widely accepted definition of TAPs in second language acquisition is that researchers require "individuals to vocalize what is going through their minds as they are solving a problem or performing a task" (Gass & Mackey, 2000, p. 13). The aim of the use of the method in study I and II was to try to tap into the thoughts of the participants while they were trying to understand and translate the unknown words. TAP is considered to be the only method able to access real time data (Bowles, 2010). The method has been criticized since it is difficult to prove that the actual thought processes are in fact what is being verbalized and that a participant might not verbalize all his/her thoughts (Ericsson & Simon, 1984; Smagorinsky, 1998). We are well aware of this when interpreting the think-aloud protocols and we can only rely on what the participants actually state that they think of. Nevertheless, this method is accepted and used in several lexical inferencing studies, (Haastrup 1991; Fraser 1999; Nassaji 2003; Bengeleil & Paribakht 2004; Hamada 2009; Hu & Nassaji 2014). In our two studies TAPs were used in combination with stimulated recalls. This method was used to prompt participants to recall thoughts they had while performing the task (Gass & Mackey, 2000). Since it was sometimes the case that the participants only translated the words without giving an explanation for their inferences, it was deemed necessary to include stimulated recalls. The participants were asked immediately after the performance of the task to explain how they were able to infer the meanings of the words, concerning the words for which no explanation was given. It was also sometimes the case that the

participants themselves were not certain of which language they thought of, or that they referred to more than one language for the inferences, as was stated in some of the protocols. One example from study I (example 3) is from the stimulated recall interview performed after the TAP (translated from Swedish into English):

> I: And **effetti** you said "effekter" and how did you know that?
>
> P6: I probably thought of English and Swedish too.

Lindqvist & Bardel (2014) point out, with an example in production from Bardel & Lindqvist (2007), that even this uncertainty can be an indication of how several languages are dealt with in the mind of a multilingual learner:

> 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. (Bardel & Lindqvist, 2007, p. 134)

The participants in study I and II performed the TAPs and stimulated recalls in Swedish, their L1, and they were also asked to translate the words into Swedish. The sessions were carried out individually with each participant and the TAPs and stimulated recalls were recorded and later transcribed. Due to time constraints it was not possible to have a training session to introduce them to how to carry out think-aloud protocols previous to the actual data collection. Nonetheless, the process was explained to them, and what they should try to verbalize. It was an unusual situation for the participants as none of them had participated in a similar task previously, and it is also possible that some participants found it easier than others to verbalize their thoughts, and this might account for the rather large individual differences regarding the number of words the participants were able to infer in study I (see diagram 6 in study I).

The quantitative part of study I consists of to what extent the strategies were used, to what extent the background languages were used and the success rate of the inferences (correct or incorrect). These data are presented in numbers and percentages, and since there were only twelve participants a statistical analysis was not included. In study II the quantitative data were analysed regarding to what extent the background languages were used and the success rate of the inferences, based on Nassaji's (2003) categorisation, i.e. correct, partially correct or incorrect. Additionally success rate per language was included, i.e. the success rate the use of the different background languages led to.

In study III there were a higher number of participants, 60 upper secondary school pupils, and due to time constraints it was not possible to collect data by means of TAPs, hence written retrospective questionnaires were used to examine the translation process. Furthermore, the methodology differs in this study as compared to the first two studies in several ways. The participants were asked to perform the translations in writing and they were asked to translate a short Italian text into, not Swedish L1 as in the other two studies, but into L2 English or L3 Spanish or French, depending on which language they were currently studying. Study III followed the design of Gibson & Hufeisen's (2003) study, in which the participants were asked to translate, in writing, a text in Swedish, an unknown language, into a known foreign language, either German or English. The reason for asking the participants to translate into another language than Swedish in study III was based on the results study I. In study I the participants also were upper secondary school pupils and had a similar linguistic background. In study I, the participants were asked to perform the TAPs in Swedish and translate the unknown words into Swedish which might have influenced the translation process and activation of this language and led to the high usage of Swedish for the inferences (at least what we can know from their statements in the TAPs). Hence, we wanted to examine if the use of Swedish would decrease when they were asked to translate into another foreign language. Written translations into foreign languages have been used in previous studies to examine the role the background languages and cross-linguistic influence, for instance in Gibson & Hufeisen (2003) and Sercu (2007). Since there were three groups translating into different languages and a higher number of participants in study III than in the previous two studies, a statistical analysis was included to be able to compare the translation accuracy between

the three groups. The translation accuracy was analysed as a mixed-effects logistic regression analysis with group as a fixed effect and pupils and words as random effects. The pairwise comparisons between the groups were tested as a general linear hypothesis.

The material used in study I was an article ("Una tazzina di caffè al giorno aiuta perchè protegge il cervello") from the Italian newspaper, *La Repubblica*, published on the 3rd of April, 2008 (see Appendix 1 in study I) This article was included in *EuRom5* (Bonvino et al., 2011), which is an intercomprehension project of the Romance languages Italian, Spanish, French, Portuguese and Catalan. The purpose of *EuRom5* is to strengthen the reading comprehension strategies used by native speakers of one Romance language reading texts in another Romance language, based on the similarities between the languages. The article was chosen since it provided ample opportunities for intercomprehension between the different languages. Apart from the title the text did not contain any extra-linguistic information, such as illustrations or pictures. In study II two texts were used, the same article as in study I to be able to compare the results of the inferences and a narrative text "Il re che doveva morire" by Gianni Rodari (see Appendix A in study II). As the article, this text did not include illustrations or pictures, only a title. The reason for using two different texts this time was to try to avoid text type influence on the inferencing task. Nevertheless, it is difficult to know if the results would have differed using other texts since, for instance, the number of cognates in the texts plays a role. As Möller and Zeevaert point out (2015, p. 314) ''the possibility for intercomprehension is necessarily closely linked to the amount of common vocabulary in the respective two languages" and this might obviously also vary between different texts. The text used in study III was created based on the text used in Gibson and Hufeisen (2003) and on typical short presentation texts usually found in textbooks for beginners (see p. 5 in study III). There was no title or any extra-linguistic information. More specific methodological details about the three studies will be presented in the next section, in which the studies are summarized.

4. Summary of the studies

This dissertation thesis contains three studies. Study I is a licenciate thesis in Italian that was published in 2015 at Lund University with the title "Il processo delle inferenze lessicali in italiano L3 – Il ruolo delle lingue apprese in precedenza e altre strategie di comprensione". This study was conducted within the framework of a national graduate school for language teachers in Sweden, FRAM (De främmande språkens didaktik). Study II is a case study, "An intercomprehension study of multilingual Swedish L1 speakers reading and decoding words in text in Italian, an unknown language", published in *Lingua*, 204, 62-77, 2018. Study III has the title "Prior language knowledge and intercomprehension at the first encounter of Italian as an additional language. A translation task." (accepted for publication in *Moderna Språk*, Vol. 113, No 1, 2019)

4.1 Study I

Study I, "Il processo delle inferenze lessicali in italiano L3 – Il ruolo delle lingue apprese in precedenza e altre strategie di comprensione", concerns Italian as an L3 and was conducted with 12 upper secondary school pupils who were studying Italian as an L3 at different levels. In Sweden, Italian is usually studied in upper secondary school as a beginner's language and the majority of the pupils have already studied two or more foreign languages, most commonly English as L2 and German, French or Spanish as L3 (see study I, section 2.1 for a discussion and definition of L2 and L3). This means that the pupils have different background languages when they start learning Italian. The aim of the study was to find out which strategies upper secondary school pupils studying Italian as an L3 used when they tried to infer the meaning of unknown words in an authentic Italian text. In many previous lexical inferencing studies (Haastrup, 1991; Nassaji, 2003; Paribakht, 2005) the texts have been adapted in some way and/or predefined

target words have been used to elicit the inferences. In the present study an authentic text without predefined target words was used. As Haastrup (2008) points out, this is "a more true-to-life reading task, in which readers themselves choose which unfamiliar words they want to deal with, and in which way" (p. 108). This gives the researcher the possibility not only to examine the strategies used but also which words they are able to infer. The study was guided by the following research questions:

1. In what way do upper secondary pupils studying Italian as L3 use lexical inferencing strategies?
2. Which strategies are mainly used by the pupils?
3. Are there differences in the use of the strategies that might depend on the linguistic background of the pupils?
4. Is there a relationship between the strategies used and success rate of the inferences?

As mentioned in section 3, to be able to investigate the participants' lexical inferencing processes, think-aloud protocols in combination with stimulated recalls were used. This means that the participants were asked to verbalize their thoughts (in Swedish) about the inferences they made during the inferencing task and explain how they were able to translate the word into Swedish. The think-aloud protocols and the stimulated recalls were recorded and later transcribed for the analysis.

The data for the study were collected in February 2014. The participants were 12 (4 male and 8 female) upper secondary school pupils from five different upper secondary schools in the south of Sweden. Their ages ranged between 16 and 19 but the majority was 17 years old and attended the second year in upper secondary school. They all had Swedish as L1 and three participants had an additional L1, Polish, Farsi and Polish/Italian. They all had English as L2 and different L3s, i.e. Spanish, French, German, Latin and Japanese. English was the foreign language that the participants had studied the longest, for between 7 and 10 years. The other foreign languages they had studied for between 1 and 5 years. English is also the foreign language that Swedish pupils in general encounter at a daily basis, using the

computer, watching television, listening to music, etc. All the participants were studying Italian at the time of data collection at three different levels. At the first level the hours of study (at the time of data collection) were approximately 50, at the second level approximately 130 and at the third level approximately 210 hours. There was only one participant at level 1, 9 participants at level 2 and two participants at level 3. Ideally, there should have been an equal number of participants at each level, however, these were the pupils who agreed to participate (see study I, section 0.1 for a further discussion of Italian as a foreign language in Sweden).

The first part of the data collection was a questionnaire in which some information about the participants' background was collected, including their mother tongue(s), what foreign languages they had studied and for how long, if they had been to Italy and if they used Italian outside of the school context. The second part was the lexical inferencing task. The participants performed the task individually. They were given instructions on the process of think-aloud and they were also instructed that they were not allowed to ask questions about the translations or look up words in a dictionary or on a computer or mobile phone. I was present during the whole process. The text used for the task was an authentic text in Italian, an article, *Una tazzina di caffè al giorno aiuta perché protegge il cervello* ("A cup of coffee a day helps because it protects the brain"). After completing the task they were asked questions about words they only translated and did not give an explanation for how they were able to infer the word. The final part of the data collection was a short interview about the participants' linguistic background. Some questions were the same as in the background questionnaire, however the interview included more detailed questions, such as their self-assessed proficiency level of their background languages, their motivation for studying Italian, what language they perceived to be the most similar to Italian and if they were aware of the strategies they normally used when trying to figure out the meaning of an unknown word in a text.

According to the classification of strategies used by, for instance Haastrup (1991), the following general categorisation of the use of strategies was made (see section 2.3 for a detailed discussion of these strategies):

- Interlingual inferences
- Intralingual inferences
- Contextual inferences

These three categories were divided more in detail after careful revision of the think-aloud protocols. The interlingual inferences were categorised based on the language(s) used, the intralingual inferences were divided into morphological cues (stem, prefix or suffix), lexical association and grammatical categories. Finally the contextual inferences were divided into textual cues (the context of the text) or world knowledge.

For the analysis the following points were addressed:

- Which of the three main strategies was used the most by the participants;
- What language is mainly used for the interlinguistic inferences;
- Which words were inferred;
- The success rate of the inferences;
- A possible relationship between the strategies used and the linguistic background of the participants.

The results showed that interlingual inferencing was the strategy used for the majority of the inferences, 83%. The context was used for 17% of the inferences and intralingual inferences in only 7% of the cases. Sometimes a combination of strategies was used and all the instances were counted separately, therefore the total exceeds 100%. Regarding the languages used, Swedish and English were the languages mainly mentioned by the participants in the think-aloud protocols and the retrospective interviews, with 64% Swedish and 42% English. There were cases when the participants mentioned both languages and they were not certain which of the two they thought of first or which one helped them the most. As regards the other background languages known by the participants, Spanish was only used for 8 inferences, French for 3, German for 1, Polish for 1 and Farsi for 1. The text contained 242 words and in total 80 words were inferred. Three

examples from the think-aloud protocols or the retrospective interviews are presented below to illustrate what the procedure might look like. The examples are first presented in Swedish and then translated to English, with the Italian target words in bold. The first example is an interlinguistic inference, the second a contextual inference and the third an intralingual inference:

(1) (cf. Ex. 1 in study I)

P3: **in questione** asså **in** asså att man pratar om den.

R: **in questione** vad sa du där?

P3: "in question" asså man säger ju det på engelska, man använder ju inte det så mycket på svenska, hur ska man förklara, det som det är frågan om.

P3: **in questione** so **in** so that you talk about it.

R: **in questione** what did you say there?

P3: "in question" so you say it in English, you don't use it so much in Swedish, how can you explain it, the thing in question.

(2) (cf. Ex. 10 in study I)

P11: **somministrato** vet jag inte heller vad det betyder men enligt sammanhanget kan jag fatta att det, eftersom det står **una dose** sen, asså en mängd, så kanske det betyder att de har gett, att de har gett, ja en mängd av tre milligram.

P11: **somministrato** I don't what that means either but according to the context I can understand it, because it says **una dose** afterwards, so a quantity, so maybe it means that

they have given, that they have given, yes a quantity of three milligrams.

(3) (cf. Ex. 17 in study I)

P3: Okey, jag kan börja med rubriken så är det **una tazzina** då vet jag att **tazza** är kopp och **–ina** är en förminskning och då blir det liten kopp.

P3: Okey, I can start with the title then it is **una tazzina** then I know that **tazza** is cup and **–ina** is a diminution and then it becomes a small cup.

An analysis of the success rate of the inferences, which were divided into correct or incorrect, showed that the interlingual inferences led to 86% correct translations, the intralingual inferences to 82% correct translations and the contextual inferences to 52% correct translations. There was a total of 384 inferences by all the participants and 309 of these, 80%, were correctly translated (see study I, Table 10). The fact that the contextual inferences only led to 52% correct translation might depend on the participants' relatively low proficiency level of Italian. Na and Nation (1985) suggest that a reader should know approximately 95% of the words in a text to successfully infer the meaning of the unknown words in a text with help of the context. Nevertheless, the participants in this study did not know 95% of the words in the text used and this could explain the relatively low percentage correct translations for the contextual inferences as compared to the other two strategies. Two of the background factors, number of foreign languages and the use of Italian outside of the school context, were considered for the success rate of the inferences. The results indicate that these factors did not seem to affect the correctness of the inferences.

With regard to the number of words that the participants were able to infer, there were considerable individual differences. There was a variation between 12 and 55 words inferred by each participant. The reasons for these

differences might be, for instance, the kind of task the participants were asked to perform, the influence of the background languages and the learning experience that learners have (Bengeleil & Paribakht, 2004). It might also depend on the method, some participants might have found it easier to verbalize their thoughts while performing the task than others. Some of the participants in the study expressed that they found the text and the task difficult, since there were so many words they did not understand. However, some participants also stated that they enjoyed the task and that it was different from anything they had previously done in school.

In the interview that was conducted after the task, one of the questions was if the participants were aware of the kinds of strategies that they normally would use if they came across unknown words in a text, regardless of language. The majority of the participants were aware of the fact that they used different strategies. The two strategies that they mentioned were interlingual and contextual inferences, none of the participants mentioned the intralingual strategy, i.e. that they make use of for instance prefixes or suffixes or the stem of the unknown word. This was also the strategy that was used the least, according to the think-aloud protocols.

To sum up, the three main lexical inferencing strategies were used by the participants. Nevertheless, the strategy mainly used was interlingual inferencing, i.e. the participants' background languages. Swedish L1 and English L2 were the dominant source languages and the other languages, Spanish, French, German, Polish and Farsi were used only in a few cases. The results regarding the use of, in particular Swedish, but also English, was somewhat surprising since we expected the participants who had studied French or Spanish to refer to these languages to a higher extent, since they are typologically closer to Italian than Swedish or English. This result, and the fact that the participants in this study had a relatively low proficiency level of their L3s as background languages, was one of the motivations for study II in this thesis. We wanted to examine if the use of the typologically close background languages would increase if the participants were at a higher proficiency level in these languages.

4.2 Study II

Study II, "An intercomprehension study of multilingual Swedish L1 speakers reading and decoding words in text in Italian, an unknown language", is a case study of three Swedish L1 university students with different L3s trying to understand and translate as much as possible of two texts in Italian, for them an unknown language. One of the texts was the same article as in study I and the other text was a narrative text, "Il re che doveva morire" by Gianni Rodari. The reason for using two different text types was to try to avoid text type influence on the inferencing task. Apart from the titles the texts did not contain any extra-linguistic information, such as pictures or illustrations. The purpose of the study was to examine the students' intercomprehension strategies, i.e. how they deal with texts, with focus on individual words, in Italian as an unknown language. The focus for the students was on understanding and decoding single words in the texts with help of their background languages, or other strategies, such as contextual cues or world knowledge. Additionally, the aim was to investigate which background languages were activated and which language(s) were most helpful for the inferencing task, i.e. led to the most correct inferences for the words inferred by the participants. There were no predefined target words, the participants chose themselves which words to infer. The results of study I included in this thesis led to our interest in examining the inferencing processes of participants with a higher level of the L3s than the participants in study I, to be able to compare the role of the proficiency level in the background languages. Furthermore, we wanted to investigate the inferencing processes in intercomprehension, i.e. when the participants had no knowledge of Italian, as compared to the participants in study I who were at a beginner's level. The study was guided by the following research questions:

1. Which of the participants' previously acquired languages are activated during the inferencing task?
2. Which of the previously acquired languages are most helpful for the inferences, i.e. lead to the most correct guesses?
3. Which words did the participants infer?
4. If the inferred words in Italian had cognates in the different languages known by the participants, which language(s) is chosen for the inference and why?

The method used in this study was think-aloud protocols, as in study I, (Ericsson & Simon, 1980; Gass & Mackey, 2000), i.e. the participants verbalized their thoughts (in Swedish) while performing the task and translating into Swedish. The reason for using this method was that we wanted to investigate the inferencing processes of the participants, not only if they were able to infer the words or not. This method was used in combination with retrospective interviews, which means that immediately after the task, the participants were asked about the translations that they did not explain during task performance. The think-aloud protocols and the retrospective interviews were recorded and later transcribed for the analysis.

The participants all had Swedish as L1, English as L2 and three different L3s, Spanish, French and German respectively, that they were studying at advanced levels at a university in Sweden at the time of data collection. They were between 23 and 30 years old. Two of the students were studying Romance languages (these participants are referred to as PF: participant French, PS: participant Spanish) and the third student was studying a Germanic language (PG: participant German) and had not previously learned a Romance language. The reason for choosing these particular participants was to be able to compare the results of the intercomprehension task regarding the use of their different L3s. It would be expected that the knowledge of a Romance language would lead to more inferences and in particular a higher success rate of the inferences.

For the data analysis, the think-aloud protocols were transcribed and carefully reviewed to be able to determine what strategies the participants used to infer the meaning of the words. The analysis showed that the participants used both top-down and bottom-up strategies, i.e. they relied on both the context and cognate similarities between the words in question. It is possible however, that the participants relied on the context more than they explicitly stated in the TAPs (Comer, 2012), i.e. there might be instances of interaction between top-down and bottom-up strategies that were not stated in the protocols. Nonetheless, the analysis showed that the participants mainly relied on their knowledge of their background languages for the inferences, at least according to what they stated in the protocols. The inferences were also analysed for success rate, correct, partially correct or incorrect. A correct inference was both semantically and syntactically

accurate; an inference that was partially correct was semantically but not syntactically correct, and an incorrect inference was neither semantically nor syntactically accurate (Nassaji, 2003). A comparison was also made between the words that were inferred by the participants, with regard to which words that were inferred by all three participants and which background language(s) that was used for these inferences. Two examples from the think-aloud protocols are presented below to illustrate the use of the background languages. The examples are provided in Swedish with translations into English, and the Italian target word is in bold:

(4) (cf. Ex. 1 in study II)

PF: **dirompenti** disruptive antar jag att det är asså ja eller också franskan tror jag en sorts blandning rompre av bryta

dirompenti (shattering) disruptive I guess which is interrupting or French I think a sort of mix rompre to break

(5) (cf. Ex. 8 in study II)

PS: **per cominciare** för att börja, cominciare som commence (English) eller comenzar (Spanish)

per cominciare (to begin) to begin, cominciare as commence (English) or comenzar (Spanish)

In example 4 the participant is able to infer the meaning correctly using both his knowledge of English and French and in example 5 the participant correctly infers the meaning with help of both English and Spanish.

The results of the analysis regarding which background languages that were used for the inferences showed that the dominant source language for the participant with French as L3 was French (47%), for the participant with

German as L3 the dominant source language was English (57%) and for the participant with Spanish as L3 it was Spanish (75%) (see study II, Table 1, p. 66). Nevertheless, all languages known by the participants were to some extent activated and used for the inferences. In some cases the participants mentioned a combination of languages in the think-aloud protocols or in the retrospective interviews. The target word in Italian resembled more than one language known by the participants, and it was not always clear to them which language they had thought of first for the inference.

Regarding the success rate of the inferences, the analysis showed that the results were very similar for the three participants as regards the use of the background languages. It is especially interesting to note that the participant with German as L3, who had no knowledge of Romance languages, was able to correctly infer nearly as much as the participants who were highly proficient in either French or Spanish (PG 68%, PF 71%, PS 69%). This result could indicate that knowledge of English is as helpful as a Romance language for understanding written Italian since as much as 50% of the English vocabulary has a Romance origin (Singleton, 1987, Schepens et al., 2013). However, the present study is a case study with only three participants and therefore it might be difficult to draw general conclusions based on these results.

56 words were inferred by all three participants (see study II, Appendix B) Of these 56 words, 25 words can be considered to have cognates in all the languages involved in the study i.e. the words are orthographically identical or similar and share the same meaning (Dijkstra, et al., 2010; Schepens, Dijkstra and Grootjen, 2012; see also section 2.4). These words could possibly have been inferred with the aid of any of the languages known by each participant, since they were highly proficient in their background languages. Nonetheless, the results were analysed with respect to which language that was actually stated by the participants as the language chosen as the source language for these inferences. The results of the analysis showed that Swedish, the participants' L1, is claimed by the participants to be the main source language for the inferences of these words. PS refers to Swedish for 16 of the 25 words, PF for 18 of the words and PG for 14 of the words (see study II, Appendix D) This result seems to indicate that when

there was a cognate in their L1, this was the language that the participants most often claimed to be activated for the inferences.

In conclusion, the findings of this study suggest that all the languages known by the participants were activated to some extent during the intercomprehension task. The results imply that all languages known to an individual may have an influence on recognition and word activation (Lemhöfer, Dijkstra and Michel 2004; De Bot 2004), at least in a word comprehension study such as the present one. The results also showed that the two participants who had French and Spanish as L3, at a high proficiency level, referred to these languages to a high degree when inferring the words. Furthermore, the results indicate that knowledge of English at a high proficiency level might be as helpful for understanding Italian words in a written text as a Romance language. However, the results of the analysis of the words with cognates in all languages involved, inferred by all three participants, showed that if there was a word with a cognate in Swedish, these three participants, in most cases, stated that Swedish, their L1, was the main source language used for the inferences. This means that even if the participants in this study used their L3 Spanish and French to a much higher degree than the participants in study I, their L1 Swedish still seemed to play an important role for the inferences. Since, as in study I, they were asked to translate the words into Swedish in the think-aloud protocols, we wanted to examine what would happen to the use and activation of Swedish if the participants instead were asked to translate into another foreign language. This led to the design of the third and last study included in this thesis. Since we wanted a higher number of participants to be able to compare the results of the translations into the different foreign languages (French, Spanish and English), we decided to use a written translation task with written retrospectiv questionnaires because think-aloud protocols with 60 participants would have been too time consuming.

4.3 Study III

Study III, ”Prior language knowledge and intercomprehension at the first encounter of Italian as an additional language. A translation task.”, is concerned with written translations of Italian as an unknown language, into

an L2 or an L3. The aim of the study was to examine and describe how multilingual Swedish L1 pupils in upper secondary school used their background languages while translating a text from Italian, an unknown language, into either their L2 English or their L3, Spanish or French. We analysed the translations both qualitatively, by means of a retrospective questionnaire, and quantitatively by calculating translation accuracy in the different languages and error rate for the most common errors or omissions. A psychotypology questionnaire was also included to examine the pupils' perception of the similarities between the languages involved in the study. The reason for choosing a different methodology for this study, as compared to study I and II, was that we wanted to investigate the use and activation of the background languages when the participants were asked to translate into another language than their L1 Swedish. Furthermore, since study III had a higher number of participants, it was not possible to use think-aloud protocols, therefore written instead of oral translations were used. This study follows the design of a previous study by Gibson & Hufeisen (2003) in which they examined the role of previous foreign language knowledge when translating from an unknown language (Swedish) into a known foreign language (English or German). The assumption was that multilingual foreign language learners browse through the lexicon of the different languages they know when they read a text in a foreign language. The participants in Gibson's & Hufeisen's study had several different L1s and they translated the Swedish text into either German or English, depending on which language they were acquiring at the time of data collection.

Study III was guided by the following research questions:

1. When translating a text from Italian (an unknown language) into L2 English or L3 French or Spanish, which background language seems to be the most helpful, i.e. leads to the highest task accuracy?
2. What can the comments written in a retrospective questionnaire tell us about the process of translating from an unknown language into an L2 or an L3?
3. Which words or phrases are the most difficult for the three groups to translate? Are there differences between the groups in this regard?
4. How do the participants perceive the similarities (psychotypology) between the languages in question?

The participants were 60 (38 female and 22 male) upper secondary pupils at a Swedish school. The data were collected during the spring semester in 2018. All the participants frequented the first year of upper secondary school and they were 16 or 17 years old at the time of data collection. All the pupils had Swedish as their L1 and a few also stated to have an additional L1. If the additional L1 was one of the languages involved in the study (Spanish, French and English), or if they were studying Italian, they were excluded from the analysis. The 60 participants were divided as follows: 23 pupils in the group translating into Spanish, 16 in the group translating into French and 21 in the one translating into English. They had studied their first foreign language, English, for between six and ten years depending on the grade in which they started to study English and they were all studying English at the time of data collection. As regards their L3s, Spanish and French, the pupils had studied these languages for between four and five years, depending on if they started to study the language in the sixth or seventh grade and they were also studying these languages at the time of data collection.

The materials used for the translation task was a short text in Italian consisting of 14 sentences (66 words). The text was created by the researcher partly based on typical short presentation texts in Italian textbooks for beginners, and partly on translations of the text used in Gibson & Hufeisen (2003). The text did not contain a title or any extra-linguistic information, such as pictures or illustrations. Moreover, a background questionnaire was included in which the pupils provided some personal data, such as age and gender as well as information on their linguistic background, i.e. their mother tongue, what languages they had studied and for how long, the frequency and the contexts in which they used the languages and their self-assessed proficiency level of each language on a Likert scale 1 to 5 (1 very low proficiency and 5 very high proficiency). To be able to examine the participants' reflections on the translation process a retrospective questionnaire was created, based on the one used in Gibson & Hufeisen (2003). Immediately after the translation task the participants were asked to fill in the questionnaire and answer questions on which languages helped them understand and translate the text, if the task was easy or difficult, if they used other strategies than their language knowledge, etc. They were also asked to give examples for each question. Finally, the pupils completed a psychotypology questionnaire immediately after the retrospective

questionnaire. This questionnaire was based on similar questionnaires used by Lindqvist (2015), Hall et al. (2009) and Schweers (1993).

The first part of the data analysis was a calculation of overall task accuracy for the three groups. There was considerable variation between the pupils in their translation accuracy. The percentage of correctly translated words ranged from only 23% by one of the pupils in the English group to 94% by two of the pupils in the Spanish group, and the accuracy results per group showed that the Spanish group reached the highest results with 80%, the French group 68% and the English group 61% (see study III, Table 2). The translation accuracy was analysed as a mixed-effects logistic regression analysis with group as a fixed effect and pupils and words as random effects. The pairwise comparisons between the groups were tested as a general linear hypothesis. The results showed that the translation accuracy in the Spanish group was significantly higher than that in the English group (EST = -1.630, SE = 0.317, z = -5.166, p = 0.000) and that in the French group (EST = -1.100, SE = 0.341, z = -3.228, p = 0.004). The difference between the French and the English group, on the other hand, was not significant (EST =-0.536, SE = 0.343, z = -1.563, p = 0.262). An analysis was also conducted of the most common error or omissions for each group. There were only minor differences between the groups. The results of the retrospective questionnaire showed that 17% of the participants claimed to be helped by Swedish, their L1. 83% stated to be aided by English and 100% of the pupils who had studied French and Spanish claimed to be helped by these languages. The pupils in the English group who had studied German as L3, stated that they were not helped at all by their knowledge of German, while all the pupils who had studied Spanish and French claimed to be helped by these languages. The qualitative part of this analysis illustrates the comments and reflections written by the participants in the questionnaire. The participants were not only able to translate single words with the aid of their previous language knowledge but, as their comments give evidence of, there were also several indications of metalinguistic awareness. Moreover, many of the participants also commented on the fact that they were aided by the context, in particular in the sense that if they could understand one or a few words in a sentence, they could infer the meaning of the following words. Below, examples 6 and 7 illustrate what two pupils wrote in the retrospective questionnaires (PS refers to participants Spanish and PF to participant

French). The examples are provided in Swedish with a following English translation and the Italian target words are in bold:

(6) (cf. Ex. 10 in study III)

PS19: **Ho trentadue anni** – likt spanskans "tengo x anos" som är uppbyggd på samma sätt. **Andare** – "andar" betyder att gå till fots på spanska som är ganska likt betydelsen av verbet "ir". Meningsuppbyggnaden av frasen där **andare** används liknar de sammanhang där "ir" används.

Ho trentadue anni – similar to Spanish "tengo x anos" which is structured the same way. **Andare** – "andar" means to go by foot in Spanish which is quite similar to the meaning of the verb "ir". The structure of the phrase in which **andare** is used is similar to the contexts where "ir" are used.

(7) (cf. Ex. 17 in study III)

PF52: Uppgiften var hyfsat lätt. Det var lätt eftersom att oftast förstod man minst ett ord I varje mening, och kunde då hitta resten av meningen med hjälp av sammanhanget Jag kunde översätta **cane** med hjälp av att den var **grande e nero** till "chien". Jag tycker definitivt att franskan hjälpte mig mest av franska, engelska och svenska.

The task was quite easy. It was easy because usually you could understand one word in each sentence and then you could find the rest of the sentence with help of the context. I was able to translate **cane** (dog) with the help that it was **grande e nero** (big and black) into "chien" (dog). I definitely think that French helped me the most of French, English and Swedish.

In these examples we see that both the similarities between the words in the different languages helped them, but also the structure of the phrases and the context at a phrasal level.

The last part of the analysis was the psychotypology questionnaire. The results showed that 87% of all the pupils believed that, in general, Spanish is the language most similar to Italian. 60% of all the pupils had studied Spanish, which means that even pupils who had not studied this language perceived it to be most similar to Italian. The remaining 13% answered French (see study III, Table 3).

To conclude, the quantitative results of the overall task accuracy showed that the Spanish group reached the highest task accuracy, the French group second and the English group reached the lowest results. Furthermore, with regard to the pupils in the English group who had studied Spanish, the results showed that their translation accuracy was significantly lower than the Spanish group. Regarding the qualitative results from the retrospective questionnaires the participants did not only rely on the lexical similarities between the different languages, but also on structural similarities and on the context, especially on a phrasal level.

5. Discussion

The purpose of this thesis was to contribute to the research on third language acquisition, with focus on the comprehension of Italian as a foreign language. As was pointed out in the introduction, it is of great importance to investigate the role of previous language knowledge for the comprehension of a third language, considering the fact that multilingualism is highlighted both by the Council of Europe and The Swedish National Agency for Education. Another motivation is the lack of research on comprehension of a foreign language in the Swedish context, as compared to research on production (see section 2.1). In study I, the main research questions regarded which strategies were used and which background languages were activated, in relation to success rate in inferencing while inferring unknown words in an Italian text by means of think-aloud protocols. The 12 Swedish L1 participants (who were studying Italian as a beginner's language in upper secondary school) were asked to translate an Italian text into Swedish. Study II examined which background languages were activated and used in the inferencing process of Italian as an unknown language. Three Swedish L1 university students with a high proficiency level of their different L3s, Spanish, French and German respectively, inferred the meaning of as many words as possible in two Italian texts, by means of think-aloud protocols in Swedish. Success rate of the inferences was examined, relating to which background language(s) they had and which words they were able to infer. In study III a written translation task in Italian as an unknown language was used. 60 upper secondary school pupils were asked to translate an Italian text into either English L2 or French or Spanish L3 in order to investigate which background language(s) led to the highest translation accuracy. In addition, they filled in a retrospective questionnaire with reflections on the translation process and a psychotypology questionnaire. The results of these three studies will be discussed in the following section.

The results of study I, regarding the strategies used by the participants, showed that all the participants mainly used interlingual inferencing strategies, i.e. they used a background language to infer the meaning of the unknown words. This result differs from previous studies in which it is most commonly either intralingual strategies (Soria, 2001) or contextual strategies (Haastrup, 1991; Fraser, 1999; Bengeleil & Paribakht, 2004) that are used. According to Na & Nation (1985) a reader should know at least 95% of the words in a text to be able to successfully use the contextual cues to infer the meaning of the unknown words. The participants in study I did not know 95% of the words in the text since they were at a beginner's level of Italian. Nevertheless, they were still able to make use of the context, although the inferences were correct in only 52% of the cases. As Comer (2012) points out however, it is possible that the context was used to a higher degree than was stated in the protocols. As has been pointed out previously, we can only rely on what the participants state that they think of in the protocols. Swedish, the participants' L1, was the background language that they claimed to be most aided by for the inferences, in 64% of the cases, and English second with 42%. According to what the participants stated, French, Spanish and German were used only in a very few cases. This was a somewhat surprising result. Considering the typological proximity between the Romance languages it was expected that the participants who had studied French and Spanish would use that knowledge to a further extent. If we compare these results to the results of study II, the dominant source language for the participant with French as L3, was French (47%), for the participant with German as L3 it was English (57%) and for the participant with Spanish as L3 it was Spanish (75%). Nevertheless, all languages known by the participants were to some extent activated and used. For some of the inferences the participants mentioned more than one language for the same inference and it was sometimes difficult for them to know which language they thought of first, or which helped them the most with a particular word. As Lindqvist & Bardel (2014) point out (see section 3), this can be an indication of how several languages are dealt with in the mind of a multilingual learner and that it is not always easy to tease apart the activation of the languages a learner has knowledge of. It might not seem very surprising that the participants in study II who had studied a Romance language would make most use of that knowledge when inferring the meaning of the words. Nonetheless, the results of study II differ from the results in study I, in which mainly Swedish was used. It appears that a higher proficiency level of the background languages led to a higher use and

activation of the these languages, which seems to confirm de Bot's (2004) hypothesis:

> Access to words in the lexicon is non-selective, i.e. words from more than one language compete for activation both in production and perception, but a – still to be defined – minimal level of proficiency/activation is needed to have words from a language play a role in the selection process, i.e. their default level of activation should be high enough to make them competitive. (pp. 23-24)

In study II, the participants had no knowledge of Italian and in study I the participants were learning Italian as a beginner's language. Previous studies (Ringbom, 1987; Möhle, 1989; Poulisse, 1990) have shown that learners with a lower level of proficiency in the target language tend to rely more on their L1 in transfer compared to learners with a higher level of proficiency. However, the results of study I and II suggest that the level of proficiency in the target language is of less importance than the proficiency level of the background languages. It might also be the case that these different factors play different roles in production and comprehension of a foreign language.

Another reason for the participants' statements in study I that Swedish was the main source for the inferences might be related to the fact that the participants were asked to translate the words into Swedish. This may have led to a higher activation of Swedish and could possibly be related to Grosjean's language mode hypothesis. According to Grosjean bilinguals' (or trilinguals') languages are active to varying degrees both in production and reception, i.e. "language mode is the state of activation of the bilingual's languages and language processing mechanisms at a given point in time" (Grosjean, 2001, p. 3). Different factors influence the language mode of a speaker, for instance, the person being spoken or listened to, the situation, the form and content of the message being uttered or listened to and specific research factors, such as the task. In study II, with regard to the cognates in the texts, there were 25 words that had cognates in all the languages involved in the study (see study II, Appendix C). We examined which background language that was used for these particular inferences since it would have been possible to infer the meaning with the aid of any of the

languages known by the participants. The results showed that Swedish was actually mentioned in most cases as the source language for these inferences. This might suggest the activation of Swedish depends on the fact that they were asked to translate into this language. The results of study III seem to confirm that the activation and use of the background languages in a translation task might depend on which language the participants are asked to translate into. In study III we asked the participants to translate from Italian (an unknown language) into another foreign language, English, French or Spanish. The results regarding which language(s) they state in the retrospective questionnaires to have helped them the most, showed that only 17% of the participants claimed to be helped by Swedish, 83% by English and all of the pupils who were studying French and Spanish stated to be helped by these languages.

Another interesting result that emerged from the data in study III concerns the comparison of translation accuracy in the three groups. In the English group (i.e. the pupils who were asked to translate into English) there were 14 pupils who had studied Spanish and they had approximately equal knowledge of Spanish and English as the pupils in the Spanish group (self-assessed proficiency level and number of years they had studied the languages), the difference was the target language that they translated the text into. The translation accuracy of the 14 pupils in the English group was 65%, which was significantly lower than the 80% in the Spanish group. It seems as though the language they were asked to translate into had an impact on the results, the knowledge of Spanish seemed less useful for the pupils who translated into English. This is another argument in favour of the hypothesis that the activation of the background languages depends on the language that is being translated into since English was activated to a higher degree than Spanish, independently of the level of proficiency. The level of activation also appeared to be more important than the perceived similarity between the languages in study III since a majority of the pupils perceived Spanish to be the most similar to Italian according to the results of the psychotypology questionnaire, even the pupils who had not studied Spanish. Even though previous research seems to support non-selective access to words in all languages known to an individual (see for instance, Lemhöfer, Dijkstra & Michel 2004) it also seems as though the level of activation of the background languages must be high enough to make them competitive (De Bot, 2004).

In study I and II, the participants' success rates for the inferences were examined, and in study II the results of the participants' success rate were very similar, regardless of the background language. The participant with German as L3, with no knowledge of Romance languages, was able to correctly infer almost as many words as the participants who were highly proficient in French or Spanish. One plausible explanation for this result could be that even though English is a Germanic language, approximately 50% of the English lexicon has a Romance origin (Singleton, 1987; Schepens et al., 2013). This could indicate that knowledge of English, at a lexical level, might be as helpful as a Romance language for the comprehension of written Italian. The participants in study II were all highly proficient in English. Nonetheless, the two participants with French and Spanish as L3 did not state to use English to the same extent as the participant with German L3, despite the fact that many of the cognate words could have been inferred with English as well. It is possible that the role of psychotypology (Kellerman, 1995), i.e. the perceived language distance experienced by the individual learner, might play a role for the activation of the background languages in this case.

Moreover, Gibson & Hufeisen (2003) have claimed that the L1 may not play a role in language learning beyond L2 if it is not perceived as close enough to the target language. It is possible, however, that how much the L1 and the previously acquired L2 and L3(s) are helpful for intercomprehension depends on the languages involved and how typologically close they are to each other. In a recent study by Mieszkowska & Otwinowska-Kasztelanic (2015) Polish L1 speakers decoded a Danish (an unknown language for those participants) text. The main source language was the participants' L2 English and L1 Polish was not activated at all, being typologically more distant from Danish than English is. The results of study I and study II suggest that the L1 does play a role for the comprehension of Italian, even though Swedish is a Germanic language and Italian a Romance language. Considering though the high number of lexical similarities between English and Italian, it could also be possible that the role of English is more prominent than is stated in the protocols, i.e. that subconsciously the participants drew on their lexical knowledge of English for the inferences, but since they performed the think-aloud protocols in Swedish, this was the language they claimed to be helped by. Furthermore, languages are not

typologically close in absolute terms, but can be referred to as a continuum, as Cenoz (2003) points out:

> The idea of a continuum is useful in the case of typology because languages are relatively distant or relatively close, not distant or close in absolute terms. For example, Spanish can be considered distant from English as compared to Dutch but closer to English as compared to Japanese. (p. 104)

Study III followed the design of the study by Gibson & Hufeisen (2003). However, it is difficult to compare the results of our study to theirs, since the target language and the background languages were different and the participants in their study had many different L1s. One of the outcomes in Gibson and Hufeisen's study was that the more foreign language experience that the participants had, the better they were at translating in general, and the were also better at applying metalinguistic strategies to figure out the correct translations. It is not possible to draw any similar conclusions from our data since all the participants had very homogeneous linguistic backgrounds. There were, however, examples of metalinguistic awareness in our data as reported in the retrospective questionnaires, but it was not possible to link these to particular features in the participants' linguistic background. Moreover, in study III the results showed that the role of the contextual cues sometimes overruled cognate similarities. This was also found in Gibson & Hufeisen (2003) and in Möller & Zeevaert (2015). As Möller & Zeevaert point out, "When the subjects have clear context based anticipations, they even accept solutions with little similarity between the word in the text and the putative German cognates" (p. 345). This indicates that even though the participants have no knowledge of the target languages, contextual factors are crucial for how they interpret individual words in a text.

In conclusion, investigating the processes of lexical inferencing and intercomprehension of Swedish L1 speakers with different background languages, by combing qualitative and quantitative data and using different tasks, we believe to have contributed to disentangling the relative importance of the respective roles of factors discussed in previous studies, such as proficiency level, activation of the background languages, psychotypology

and language mode. In particular, by using these different methods, data samples and tasks we have also shown, contrary to previous research using only one method, the importance of the task for the activation of the background languages in comprehension and also the relevance of different language combinations of the participants. In lexical inferencing and intercomprehension learners may activate all their background languages to some extent, depending on for instance language mode and proficiency level of the background languages and which language they are asked to translate into. Furthermore, the studies included in this thesis have given rise to pedagogical implications relevant to foreign language learning and teaching and additionally, ideas and suggestions for future studies. A few of these will be discussed in the following sections.

5.1 Pedagogical implications

A number of issues relevant to teaching and learning of foreign languages have arisen while conducting the studies included in this thesis. Concerning the use of lexical inferencing strategies we believe that learners first and foremost should be made aware of the strategies available to them and how to use them, i.e. explicit instruction of these strategies is necessary. The results of study I showed that the intralingual inferences were the least used and even if this could depend on their low proficiency level of Italian, it is still valuable to explicitly teach the learners about how words in the target language are structured, with focus on, for instance, morphology and word constructions to increase the possibility of using this strategy. Moreover, as has also been pointed out in previous lexical inferencing studies, instead of providing the learners with lists of words when reading a text in a foreign language, they should be encouraged to discuss possible translations of the words, with use of different strategies to make them aware of the potentials they have to infer the meaning of the unknown words. As the results of study II and III gave evidence of, the learners who had no previous knowledge of Italian were still able to infer the meaning of Italian words, mainly with the help of their background languages. The comments in the retrospective questionnaires in study III showed that many of the participants were positively surprised that they could understand Italian with help of their background languages. In foreign language teaching it would be beneficial to use similar tasks to make the learners aware of the usefulness of knowing

more than one foreign language for, in particular, the comprehension of other related foreign languages.

Furthermore, previous research has shown that multilinguals have superior metalinguistic and metacognitive abilities, i.e. they can draw comparisons between different languages and use appropriate strategies when learning an additional foreign language (Jessner, 1999; De Angelis, 2007; De Angelis, 2011). However, it seems as though learners need to be made aware of how they can use their previous linguistic and language learning knowledge to enhance the benefits of multilingualism, and language teachers play an important role in this multilingual pedagogy (Haukås, 2016). Multilingual pedagogy is referred to as a learner-centred approach, which should enhance learners' language (learning) awareness across the languages they know (Neuner, 2004). There are important components of language teachers' awareness regarding multilingual pedagogy and some of them are:

- Language teachers should be multilingual themselves and act as models for their pupils.
- They should have crosslinguistic and metalinguistic knowledge.
- They should have knowledge of research on multilingualism
- They should be willing to collaborate with other (language) teachers to promote pupils' multilingualism.

(De Angelis, 2011; Otwinowska, 2014; Haukås, 2016):

Hence, the role of language teachers appears to be crucial for the learners' development of multilingual awareness and how they can use their knowledge of the previously acquired languages when learning another foreign language.

5.2 Future research

In study I the participants were asked about the strategies that they were aware of using when reading a text in a foreign language. They also claimed

that in the language classroom the use of different strategies for improving comprehension of text was rarely mentioned. In a future study, a comparison could be made between two groups of foreign language learners, one group that is explicitly taught how to use different strategies, such as the ones mentioned in study I, and one group that is not. It could be beneficial both for language learners and language teachers to gain more knowledge of how the use of comprehension strategies might improve with explicit instruction. Regarding intercomprehension of different languages, the results of the studies included in the present thesis can only be discussed with regard to the languages involved here. Future studies should include participants with other L1s and various target and background languages for a deeper understanding of intercomprehension between different languages. A higher number of participants would also make it clearer which conclusions can be drawn from the results. Since the studies included in this thesis all concern the reception of a foreign language and much previous research on cross-linguistic influence and the use of previously acquired languages concern production, a suggestion for a future study could be to include and compare both these modalities with the same participants. Would there be differences concerning the use of the background languages in, for instance, oral or written production as compared to the reception of written texts?

> **Finisce** kanske kan ha någonting att göra med att ”ta slut” eller ”avsluta” som i finir (Spanish), finir på franska eller finish på engelska.
>
> ‘**Finisce** (ends) maybe has something to do with “ending” or “finishing” as in finir (Spanish), finir in French or finish in English’ (From a think-aloud protocol of one of the participants)

References

Alavi, S.M. & Kaivanpanah, S. (2009). Examining the Role of Individual Differences in Lexical Inferencing. *Journal of Applied Sciences*, 9(15), 2829-2834.

Bardel, C. & Linqvist, C. (2007). The role of proficiency and psychotypology in lexical cross- linguistic influence. A study of a multilingual learner of Italian L3. In *Atti del VI Congresso di Studi dell'Associazione Italiana di Linguistica Applicata*, Napoli, 9–10 febbraio, 2006, 123–145. Perugia: Guerra Editore.

Bardel, C. (2015). Lexical cross-linguistic influence in third language development. In H. Peukert (Ed.) *Transfer Effects in Multilingual Language Development,* 111–128. Amsterdam/Philadelphia: John Benjamins.

Bengeleil, N. & Paribakht, T. S. (2004). L2 Reading Proficiency and Lexical Inferencing by University EFL Learners. *The Canadian Modern Language Review,* 61(2), 225-249.

Bonvino, E., Caddéo, S., Serra, E.A. & Pippa, S. (2011). *EuRom5*. Milano: Hoepli Editore S.P.A.

Bowles, M. (2010). *The Think-Aloud Controversy in Second Language Research.* New York, NY: Routledge.

Carton, A.S. (1971). Inferencing: a process in using and learning language. In P. Pimsleur & T. Quinn (Eds.) *Papers from the Second International Congress of Applied Linguistics,* Cambridge, 1969. Cambridge: Cambridge University Press.

Cenoz, J. (2001). The Effect of Linguistic Distance, L2 Status and Age on Cross-linguistic Influence in Third Language Acquisition. In J. Cenoz, B. Hufeisen, & U. Jessner (Eds.) *Cross-Linguistic Influence in Third Language Acquisition: Psycholinguistic Perspectives*, 8-20. Clevedon: Multilingual Matters.

Cenoz, J. (2003). The role of typology in the organization of the multilingual lexicon. In J. Cenoz, B. Hufeisen, & U. Jessner (Eds.) *The Multilingual Lexicon*, 103-116. Dordrecht: Kluwer.

Cenoz, J. (2013). Defining Multilingualism. *Annual Review of Applied Linguistics*, 33, 3-18.

Clarke, D. F. & Nation, I. S. P. (1980). Guessing the meaning of words from context: Strategy and techniques. *System,* 8(3), 211-220.

Comer, W. J. (2012). Lexical inferencing in reading L2 Russian. *Reading in a Foreign Language,* 24(2), 209-230.

Council of Europe (2007). *Common European Framework of Reference for Languages: Learning, teaching, assessment.* Modern Languages Division, Strasbourg. Cambridge: Cambridge University Press.

De Angelis, G. & Selinker, L. (2001). Interlanguage transfer and competing linguistic systems in the multilingual mind. In J. Cenoz, B. Hufeisen, & U. Jessner (Eds.) *Cross-linguistic influence in third language acquisition,* 42–58. Clevedon: Multilingual Matters.

De Angelis, G. (2007). *Third or Additional Language Acquisition.* Clevedon: Multilingual Matters.

De Angelis, G. (2011). Teachers' beliefs about the role of prior language knowledge in learning and how these influence teaching practices. *International Journal of Multilingualism*, 8(3), 216-234.

De Bot, K. (2004). The Multilingual Lexicon: Modelling Selection and Control. *International Journal of Multilingualism*, 1(1), 17-32.

De Groot, M.B.A., Delmar, P. & S.J. Lupker (2000). The processing of interlexical homographs in translation recognition and lexical decision: Support for non-selective access to bilingual memory. *The Quarterly Journal Of Experimental Psychology Section A,* 53(2), 397-428.

Dijkstra, T. & van Hell, J.G. (2003). Testing the Language Mode Hypothesis Using Trilinguals. *International Journal of Bilingual Education and Bilingualism,* 6(1), 2-16.

Dijkstra, T., Miwa, K., Brummelhuis, B., Sappelli, M. & Baayen, H. (2010). How cross-language similarity and task demands affect cognate recognition. *Journal of Memory and Language,* 62, 284-301.

Ericsson, K.A., & Simon, H.A. (1980). Verbal reports as data. *Psychological Review,* 87, 215-253.

Fraser, C.A. (1999). Lexical processing strategy use and vocabulary learning through reading. *SSLA,* 21, 225-241.

Gibson, M. & Hufeisen B. (2003). Investigating the role of prior foreign language knowledge. In J. Cenoz, B. Hufeisen, & U. Jessner (Eds.) *The Multilingual Lexicon*, 87-102. Dordrecht: Kluwer.

Gass, S.M., & Mackey, A. (2000). *Stimulated Recall Methodology in Second Language Research.* New York, NY: Routledge.

Green, D.W. (1986). Control, activation, and resource: A framework and a model for the control of speech in bilinguals. *Brain and Language,* 27(2), 210-223.

Grosjean, F. (2001). The bilingual's language modes. In J. Nichol (Ed.) *One Mind, Two Languages: Bilingual Language Processing,* 1-25. Oxford: Blackwell.

Haastrup, K. (1991). *Lexical Inferencing Procedures or Talking About Words.* Tubingen, Germany: Gunter narr.

Haastrup, K. (2008). Lexical Inferencing Procedures in Two Languages. In D. Albrechtsen, K. Haastrup & B. Henriksen (Eds.) *Vocabulary and writing in a first and second language: Processes and development.* Palgrave Macmillan: New York.

Hall, C. J., Newbrand, D., Ecke, P., Sperr, U., Marchand, V. & Hayes, L. (2009). Learners' implicit assumptions about syntactic frames in new L3 words: The role of cognates, typological proximity and L2 status. *Language Learning,* 59, 153-203.

Hamada, M. (2009). Development of L2 word-meaning inference while reading. *System,* 37(3), 447-460.

Hammarberg, B. (2001). Roles of L1 and L2 in L3 Production and Acquisition. In J. Cenoz, B. Hufeisen & U. Jessner (Eds.) *Cross-linguistic Influence in Third Language Acquisition: Psycholinguistic Perspectives,* 21-41. Clevedon, UK: Multilingual Matters.

Hammarberg, B. (2009). *Processes in third language acquisition.* Edinburgh: Edinburgh University Press.

Hammarberg, B. (2016). Flerspråkighet och tredjespråksinlärning – några grundbegrepp. In C. Bardel, Y. Falk & C. Lindqvist (Eds.) *Tredjespråksinlärning,* 33-58. Lund: Studentlitteratur.

Haukås, Å. (2016). Teachers' beliefs about multilingualism and a multilingual pedagogical approach. *International Journal of Multilingualism*, 13(1), 1-18.

Henry, A. (2016). Tredjespråksinlärning och motivation. In C. Bardel, Y. Falk & C. Lindqvist (Eds.) *Tredjespråksinlärning,* 165-187. Lund: Studentlitteratur.

Heeringa, W., Golubovic, J., Gooskens, C., Schüppert, A., Swarte, F., Voigt, S. (2013). Lexical and orthographic distances between Germanic, Romance and Slavic languages and their relationship to geographic distance. In C. Gooskens, R. van Bezooijen (Eds.) *Phonetics in Europe: Perception and Production*, 99-137. Peter Lang, Frankfurt am Main.

Hu, H. & Nassaji, H. (2012). Ease of Inferencing, Learner Inferential Strategies, and Their Relationship with the Retention of Word Meanings Inferred from Context. *The Canadian Modern Language Review,* 68(1), 54-77.

Hu, H. & Nassaji, H. (2014). Lexical inferencing strategies: The case of successful versus less successful inferencers. *System,* 45, 27-38.

Hufeisen, B. & Marx, N. (Eds.) (2007). *EuroComGerm – Die sieben Siebe: Romanische Sprachen sofort lesen können.* Aachen, Germany: Shaker.

Hufeisen, B. (2005). Multilingualism: Linguistic models and related issues. In B. Hufeisen & R.J. Fauser (Eds.) *Introductory readings in L3,* 31-45. Tübingen: Stauffenburg Verlag.

Jessner, Ulrike (1999). Metalinguistic awareness in multilinguals: Cognitive aspects of third language learning. *Language awareness,* 8(3 & 4), 201-209.

Kaivanpanah, S. & Moghaddam M.S. (2012). Knowledge Sources in EFL Learners' Lexical Inferencing across Reading Proficiency Levels. *RELC Journal,* 43(3), 373-391.

Kellerman, E. (1983). Now you see it, now you don't. In S. Gass & L. Selinker (Eds.) *Language transfer in language learning,* 112-134. Massachusetts: Newbury House Publishers.

Kemp, C. (2009). Defining Multilingualism. In L. Aronin & B. Hufeisen (Eds.) *Exploration of Multilingualism: Development of Research on L3, Multilingualism and Multiple Language Acquisition*, 11-26. Amsterdam: John Benjamins.

Klein, H. & Stegmann, T. (2000). *EuroComRom – Die sieben Siebe: Romanische Sprachen sofort lesen können.* Wien, Austria: Wilhelm Braumüller.

Lemhöfer, K., Dijkstra, T. & Michel, M.C. (2004). Three languages, one ECHO: Cognate effects in trilingual words recognition. *Language and Cognitive Processes,* 19(5), 585-611.

Lindqvist, C. (2009). The use of the L1 and the L2 in French L3: examining cross-linguistic lexemes in multilingual learners' oral production. *International Journal of Multilingualism*, 6(3), 281–297.

Lindqvist, C. & Bardel, C. (2014). Exploring the impact of the proficiency and typology factors: two cases of multilingual learners' L3 Learning. In M. Pawlak & L. Aronin (Eds.) *Essential topics in applied linguistics and multilingualism. Studies in honor of David Singleton,* 253–266. Heidelberg: Springer.

Lindqvist, C. (2015). Do Learners Transfer from the Language They Perceive as Most Closely Related to the L3? The Role of Psychotypology for Lexical and Grammatical Crosslinguistic Influence in French L3. In G. De Angelis, U. Jessner & M. Kresić (Eds.) *Crosslinguistic Influence and Crosslinguistic Interaction in Multilingual Language Learning*, 231-252. London: Bloomsbury Academic.

Marx, N. (2011). Reading across the Germanic languages: Is equal access just wishful thinking? *International Journal of Bilingualism,* 16(4), 467-483.

McArthur, T. (Ed.) (1992). *The Oxford Companion to the English Language.* Oxford: Oxford University Press.

Milton, J. (2009). *Measuring second language acquisition*. Bristol/Buffalo/Toronto: Multilingual Matters.

Möhle, D. (1989). Multilingual interaction in foreign language production. In H.W. Dechert & M. Raupach (Eds.) *Interlingual Processes,* 179-195. Tübingen: Narr.

Möller, R. & Zeevaert, L. (2015). Investigating word recognition in intercomprehension: Methods and Findings. *Linguistics,* 53(2), 313-352.

Na, L. & Nation, I.S.P. (1985). Factors affecting guessing vocabulary in context. *RELC Journal,* 16, 33-42.

Nassaji, H. (2003). L2 Vocabulary Learning From Context: Strategies, Knowledge Sources, and Their Relationship With Success in L2 Lexical Inferencing. *TESOL QUARTERLY*, 37(4), 645-670.

Neuner, G. (2004). The concept of plurilingualism and tertiary language didactics. In B. Hufeisen & G. Neuner (Eds.) *The plurilingualism project: Tertiary languaage learning – German after English*, 13-34. Strasbourg: Council of Europe.

Odlin, T. (1989). *Language Transfer: Cross-linguistic Influence in Language Learning.* Cambridge: Cambridge University Press.

Otwinowska, A. (2014). Does multilingualism influence plurilingual awareness of Polish teachers of English? *International Journal of Multilingualism*, 11(1), 97-119.

Paribakht, T. S. (2005). The Influence of First Language Lexicalization on Second Language Lexical Inferencing: A Study of Farsi-Speaking Learners of English as a Foreign Language. *Language Learning,* 55(4), 701-748.

Peyer, E., Kaiser, I. & Berthele, R. (2010). The multilingual reader: advantages in understanding and decoding German sentence structure when reading German as an L3. *International Journal of Multilingualism*, 7(3), 225-239.

Poulisse, N. (1990). *The Use of Compensatory Strategies by Dutch Learners of English.* Dordrecht: Foris.

Ringbom, H. (1987). *The Role of the First Language in Foreign Language Learning.* Clevedon, UK: Multilingual Matters.

Ringbom, H. (2001). Lexical transfer in L3 production. In J. Cenoz, B. Hufeisen & U. Jessner (Eds.) *Cross-linguistic Influence in Third Language Acquisition: Psycholinguistic Perspectives,* 59-66. Clevedon, UK: Multilingual Matters.

Ringbom, H. (2007). *Cross-linguistic Similarity in Foreign Language Learning.* Clevedon, UK: Multilingual Matters.

Schepens, J., Dijkstra, T. & Grootjen, F. (2012). Distributions of cognates in Europe as based on Levenshtein distance. *Bilingualism: Language and Cognition,* 15(1), 157-166.

Schepens, J., Dijkstra, T., Grootjen, F. & van Heuven, W.J.B. (2013). Cross-Language Distributions of High Frequency and Phonetically Similar Cognates. *PLoS ONE,* 8(5), 1-15.

Schweers, S. (1993). Variation in cross-linguistic influence on interlanguage lexicon as a function of perceived first-language distance, PhD. diss., New York University.

Sercu, Lies (2007). Acquiring Multilingualism at School. What Translation tasks tell Us about Adolescents' Use of the Multilingual Lexicon. *International Journal of Multilingualism,* 4(1), 52-75.

Singleton, D. (1987). Mother and other tongue influences on learner French. *Studies in Second Language Acquisition,* 9*,* 327-345.

Smagorinsky, P. (1998). Thinking and Speech and Protocol Analysis. *MIND, CULTURE, AND ACTIVITY*, 5, 157-177.

Soria, J. (2001). A Study of Ilokano Learners' Lexical Inferencing Procedures Through Think-aloud. *Second Language Studies,* 19(2), 77-110.

Szubko-Sitarek, W. (2011). Cognate facilitation effects in trilingual word recognition. *Studies in Second Language Learning and Teaching,* 1, 189-208.

Ten Thije, J.D. & Zeevaert, L. (2007). *Receptive Multilingualism: Linguistic analyses, language policies and didactic concepts.* Amsterdam/Philadelphia: John Benjamins.

Tytus, A. E. (2018). Active and dormant languages in the multilingual mental lexicon. *International Journal of Multilingualism.* Advanced online publication.

Van Bezooijen, R. & Gooskens, C. (2007). Interlingual text comprehension: Linguistic and extralinguistic determinants. In ten Thije, J.D. & Zeevaert, L. (Eds.) *Receptive Multilingualism. Linguistic analyses, language policies and dialectic concepts,* 249-263. Amsterdam: John Benjamins.

Vanhove, J. & Berthele, R. (2015a). The lifespan development of cognate guessing skills in an unknown related language. *IRAL,* 53(1), 1-38.

Vanhove, J. & Berthele, R. (2015b). Item-related Determinants of Cognate Guessing in Multilinguals. In G. De Angelis, U. Jessner & M. Kresic (Eds.) *Crosslinguistic Influence and Crosslinguistic Interaction in Multilingual Language Learning,* 95-118. Bloomsbury Academic.

Wang, Q. (2011). Lexical Inferencing Strategies for Dealing with Unknown Words in Reading – A Contrastive Study between Filipino Graduate Students and Chinese Graduate Students. *Journal of Language Teaching and Research,* 2(2), 302-313.

Williams, S. & Hammarberg, B. (1998). Language swithches in L3 production: Implications for a polyglot speaking model. *Applied Linguistics,* 19, 295-333.

Österberg, R. & Bardel, C. (2016). Det andra främmande språket i svensk skola – utbildningsvetenskapliga reflektioner. In C. Bardel, Y. Falk & C. Lindqvist (Eds.) *Tredjespråksinlärning,* 13-31. Lund: Studentlitteratur.

Sammanfattning (Summary in Swedish)

1. Bakgrund

Denna avhandling är en sammanläggning av tre studier, en licenciatavhandling på italienska och två artiklar på engelska. Idén till studierna föddes i min egen erfarenhet som lärare på gymnasiet i italienska och engelska. Eleverna som väljer italienska som nybörjarspråk på gymnasiet har i de flesta fall studerat engelska som första främmande språk och tyska, spanska eller franska som andra främmande språk. Jag har under mina många år som lärare observerat att när dessa elever försöker producera något på italienska, både i tal och i skrift, är det vanligt att de som studerat franska eller (framförallt) spanska använder sig av dessa språk då de inte kan det italienska ordet. Det är däremot inte lika vanligt att de utnyttjar dessa kunskaper i sina tidigare inlärda språk när de läser och försöker förstå okända ord i text, i läroboken till exempel. I forskningen om det som kallas *lexical inferencing,* det vill säga hur man kan gissa betydelsen av okända ord i text, brukar man nämna tre huvudstrategier, nämligen (se till exempel Haastrup, 1991):

- *Interlingual inferencing* vilket innebär att inläraren använder sig av likheterna mellan de språk man kan (kognater) för att gissa betydelsen av ordet.
- *Intralingual inferencing* innebär att inläraren använder sig av kunskaperna i målspråket, till exempel morfologin, som stammen av ett ord, prefix eller suffix.

- *Contextual inferencing* innebär att inläraren förlitar sig på kontexten i vilken ordet finns, det kan vara på frasnivå, textens innehåll i allmänhet eller omvärldskunskaper.

Dessa tre huvudstrategier användes vid kategoriseringen i den första studien eftersom de deltagarna redan hade kunskaper i italienska och för att kunna använda sig av till exempel *intralingual inferencing* är det nödvändigt att ha kunskaper i målspråket. Fokus i de andra två studierna är *intercomprehension,* det vill säga hur man förstår okända språk med hjälp av sitt modersmål eller andra bakgrundsspråk, man har alltså inga kunskaper i målspråket. I dessa studier hade deltagarna inte studerat italienska alls. Intresset för *intercomprehension* har ökat under de senaste åren (Van Bezooijen & Gooskens, 2007; ten Thije & Zeevaert, 2007; Marx, 2011; Möller & Zeevaert, 2015) och även i GERS (Gemensam europeisk referensram för språk) och i ”Ämnets syfte” för moderna språk (Skolverket) nämns det faktum att kunskaper i olika språk ska samverka och stödja varandra. Den främsta anledningen till att de tre studierna är utformande på olika sätt och har olika typer av deltagare är resultaten av framförallt den första studien. Detta kommer att diskuteras i avsnitt 4.

I Sverige har forskningen om bakgrundsspråken roll för inlärningen av främmande språk framförallt handlat om muntlig produktion (se till exempel Bardel & Lindqvist 2007, Lindqvist, 2009, 2010). Med studierna i denna avhandling hoppas jag bidra till forskningen om inlärningen av främmande språk i en svensk kontext, med fokus på bakgrundsspråkens roll för förståelse av italienska, till skillnad från muntlig produktion.

2. Syfte och forskningsfrågor

Det övergripande syftet med studierna i denna avhandling är att undersöka vilken betydelse bakgrundsspråken (och eventuellt andra strategier) har för svensktalande elever på gymnasiet, eller på universitetsnivå, när de försöker förstå okända ord i italiensk text, antingen som nybörjarspråk eller okänt språk. Huvudsyftet med den första studien med 12 deltagare, var att undersöka vilka strategier deltagarna använde sig av, vilka bakgrundsspråk

som hjälpte dem mest och vilka strategier som ledde till mest korrekta översättningar. Huvudsyftet med den andra studien, som är en fallstudie med tre deltagare utan kunskaper i italienska men en högre kunskapsnivå i bakgrundsspråken än deltagarna i första studien, var att undersöka vilka bakgrundsspråk de använde sig mest av och vilka språk som ledde till mest korrekta översättningar. I den tredje studien, med 60 deltagare, hade deltagarna inte heller några kunskaper i italienska. De översatte till engelska, spanska eller franska i stället för svenska. Huvudsyftet var att ta reda på vilket språk som ledde till mest korrekt översättning och vilken roll svenskan hade för förståelsen av italienska när de inte översatte till svenska.

Studierna är utformade på olika sätt och har därför något olika forskningsfrågor, men sammanfattningsvis är forskningsfrågorna följande:

- Vilka strategier använder inlärare av italienska på gymnasiet sig av för att förstå okända ord i italiensk text?
- Vilka bakgrundsspråk används mest för att förstå italienska, både som ett nybörjarspråk och som ett okänt språk?
- Vilka bakgrundsspråk och vilka strategier leder till mest korrekta översättningar?

3. Metod och material

I de första två studierna användes *think-aloud protocols*, det vill säga deltagarna fick tänka högt och verbalisera sina tankar kring hur de kunde gissa betydelsen av de okända orden i texten samtidigt som de utförde uppgiften. Denna metod har använts mycket i liknande studier, även om den är omdiskuterad. Nackdelen är att man inte kan vara säker på att deltagarna faktiskt verbaliserar allt de tänker på (Smagorinsky, 1998), men fördelen är att deltagarna utför uppgiften och tänker högt i realtid och på så sätt inte hinner glömma hur de tänkt (Bowles, 2010). Trots nackdelarna är detta den metod som passade bäst för de två första studierna och som nämndes ovan är det en vedertagen metod i detta forskningsområde. Det hände ibland i mina studier att deltagarna endast översatte orden, utan att förklara hur de

översatte dem. Därför användes även retrospektiva intervjuer, vilket i detta fall innebar att direkt efter *think-aloud* bad jag deltagarna förklara hur de kom fram till översättningen. I den första studien användes en autentisk italiensk text, en artikel med titeln ”Una tazzina di caffè al giorno aiuta perchè protegge il cervello” från *La Repubblica*. I den andra studien användes samma artikel och även en kort narrativ text, ”Il re che doveva morire” av Gianni Rodari.

I den tredje studien var deltagarantalet högre än i de två första studierna, 60 gymnasielever jämfört med 12 gymnasieelever i den första och 3 universitetsstuderande i den andra. Detta innebar att det skulle vara alltför tidskrävande att genomföra *think-aloud protocols.* Jag valde därför att använda mig av skrivna retrospektiva enkäter som deltagarna fick fylla i direkt efter att de genomfört uppgiften och även översättningsuppgiften var skriftlig i stället för muntlig. Här fick deltagarna, som inte kunde någon italienska, översätta en kort text som jag skapat, till antingen deras L2 (andra språk), engelska eller deras L3 (tredje språk), spanska eller franska. Texten (och även metoden) var delvis baserad på en text som använts i en tidigare studie av Gibson & Hufeisen (2003) men även på typiska presentationstexter som man kan hitta i läroböcker för nybörjare. De 60 deltagarna var således indelade i tre grupper, en grupp med olika L3 som översatte till engelska, en grupp med spanska som L3 som översatte till spanska och en med franska som L3 som översatte till franska. En statistisk analys genomfördes för att jämföra de tre gruppernas översättningskorrekthet. Deltagarna fick också fylla i en psykotypologienkät, (se till exempel Lindqvist, 2015) där de fick svara på frågor om hur lika eller olika de uppfattar de olika språken att vara när det gäller till exempel vokabulär och grammatik.

4. Resultat och diskussion

Som nämndes ovan är den främsta anledningen till att de tre studierna har olika utformning och olika typer av deltagare resultaten av respektive studie. Resultaten i den första studien visade att den strategi deltagarna använde sig mest av var *interlingual inferencing,* det vill säga, deras bakgrundsspråk, i 83% av fallen. De använde sig av kontexten på olika sätt i 17% av inferenserna och 7% var *intralingual inferencing*. Summan överstiger 100%

eftersom de ibland angav mer än en strategi och alla inferenser räknades separat. Det visade sig också att för en majoritet av inferenserna, 64%, uppgav deltagarna att det var svenska som hjälpte dem att förstå ordet i fråga och i 42% av fallen var det engelska. Deras övriga bakgrundsspråk, franska, spanska, tyska, polska och persiska (två deltagare hade polska respektive persiska som ett andra modersmål) användes endast i några enstaka fall. När det gäller korrektheten av inferenserna visade resultaten att av totalt 384 inferenser var 309 korrekta (80%). Dessutom, vad beträffar de olika strategierna, visade resultaten att användandet av *interlingual* och *intralingual inferencing* ledde till 86% respektive 82% korrekta översättningar, medan kontexten ledde till 52% korrekta översättningar.

Anledningen till att deltagarna använde sig av sina bakgrundsspråk i en majoritet av fallen kan bero på att deras kunskaper i italienska var begränsade eftersom de studerade italienska som nybörjarspråk. Enligt Na & Nation (1985) bör en läsare kunna ungefär 95% av orden i en text för att på ett bra sätt kunna använda sig av kontexten för att gissa betydelsen av de okända orden. Detta är inte fallet för deltagarna i denna studie. Det faktum att de gjorde *think-aloud* på svenska och att de var ombedda att översätta till svenska kan ha påverkat att de i de flesta fall uppgav svenska som det språk de mest använde sig av. Dessutom kan det faktum att de använde sig så lite av till exempel franska och spanska bero på att deras färdighetsnivå i dessa språk inte var tillräckligt hög för att de skulle kunna utnyttja dessa kunskaper (se de Bot, 2004). Svenska och engelska är också de språk som de använder dagligen och de är på så sätt de mest aktiverade språken. Det var ändå lite förvånande att deltagarna inte använde sig av framförallt franska eller spanska i så stor utsträckning, med tanke på att det ofta är dessa språk som dyker upp i deras produktion av italienska. De här resultaten ledde till den andra studien.

I den andra studien ville jag undersöka om användandet av bakgrundsspråken skulle förändras om deltagarna hade en högre färdighetsnivå i franska och spanska som L3 och dessutom hur man som läsare av italiensk text kan förstå italienska om man inte har studerat något romanskt språk alls. Även i denna studie användes *think-aloud protocols* som genomfördes på svenska och deltagarna översatte till svenska. Resultaten visade att deltagaren som hade franska som L3 använde sig av

detta språk för 47% av inferenserna, deltagaren som hade spanska som L3 för 75% och deltagaren som hade tyska som L3 och alltså inte hade studerat ett romanskt språk, använde sig av engelska för 57% av inferenserna. I vissa fall angav de mer än ett språk för samma inferens. Vad beträffar korrektheten av översättningarna visade resultaten att deltagaren med tyska som L3 kom upp i 68% korrekta översättningar, deltagaren med franska som L3 71% och spanska som L3 69%.

Den engelska vokabulären består till 50% av ord som har ett romanskt ursprung (Singleton 1987; Schepens et al. 2013) och detta skulle kunna förklara den höga procenten korrekta översättningar av deltagaren med tyska som L3, alltså engelska skulle kunna vara till lika stor hjälp för att förstå italiensk text som ett romanskt språk. Det är dock svårt att dra för stora slutsatser av denna fallstudie med endast tre deltagare. Jag undersökte också vilka ord deltagarna infererade och 56 ord var gemensamma för alla tre. Av dessa 56 ord har 25 kognater i alla språk som var inkluderade i studien (svenska, engelska, tyska, franska, spanska och italienska). För majoriteten av dessa ord angav deltagarna att de använt sig av svenska för att inferera betydelsen av ordet. Det är svårt att veta med säkerhet varför, men en anledning skulle kunna vara att de var ombedda att översätta till svenska och därför, när det fanns en möjlighet att använda sig av svenska, var det detta språk som aktiverades mest.

I den tredje studien ändrades därför utformningen av studien så att deltagarna inte skulle översätta till svenska, delvis för att se om detta skulle påverka hur mycket de refererade till svenska för översättningarna. I den retrospektiva enkäten, i vilken deltagarna fick svara på frågor om översättningsprocessen och vilka språk som hjälpt dem med översättningen, svarade 17% av deltagarna att de var hjälpta av svenskan. 83% ansåg att de blivit hjälpta av engelskan, medan 100% av de som studerade franska och spanska angav att de blivit hjälpta av sina kunskaper i dessa språk. Detta antyder att aktiveringen och användandet av bakgrundsspråken när man översätter och försöker förstå okända ord i text kan bero på vilket språk man översätter till. Vad beträffar översättningskorrektheten i de olika språken fanns det stora individuella skillnader, från 23% korrekt av en deltagare i engelskgruppen till 94% korrekt av två deltagare i spanskgruppen. Den statistiska analysen visade att översättningskorrektheten var signifikant

högre i spanskgruppen jämfört med engelskgruppen och franskgruppen. Skillnaden mellan franskgruppen och engelskgruppen var inte statistiskt signifikant, även om franskgruppen hade en högre korrekthet än engelskgruppen. Dessutom visade resultaten av översättningarna att även de elever i engelskgruppen som hade studerat spanska lika länge och ansåg sig vara lika bra på spanska som de i spanskgruppen ändå hade ett signifikant lägre resultat på sina översättningar till engelska. De borde ha kunnat utnyttja sina kunskaper i spanska i lika hög grad som de som översatte till spanska, men här verkar aktiveringen av spanskan blivit ”hindrad” av det faktum att de översatte till engelska.

Den kvalitativa delen i studien bestod av deltagarnas kommentarer i den retrospektiva enkäten beträffande vilka bakgrundsspråk som hjälpt dem med specifika ord på italienska men även generella kommentarer om översättningsuppgiften. Deltagarna skrev till exempel om de tyckte uppgiften var lätt eller svår, om de blivit hjälpta av sammanhanget, och så vidare. Vissa skrev att de blivit hjälpta av sammanhanget på olika sätt, till exempel om de trodde att de förstod ett ord i en mening, kunde de lista ut vad de andra orden betydde. Några deltagare kommenterade att de uppskattade uppgiften och tyckte att det var roligt att märka att de kunde förstå så mycket av italienska med hjälp av sina bakgrundsspråk. Det huvudsakliga resultatet av psykotypologienkäten visade att en majoritet av deltagarna, 87%, ansåg generellt att spanska var mest likt italienska och detta gällde även de som inte hade studerat spanska.

Sammanfattningsvis har de tre studierna som ingår i denna avhandling visat att färdighetsnivån i bakgrundsspråken verkar ha betydelse för i vilken grad de aktiveras vid förståelse av okända ord i italiensk text. Resultaten av studierna antyder även att det har betydelse för aktiveringen av bakgrundsspråken vilket språk man översätter till och att även svenska och engelska, som är germanska språk, har betydelse för förståelse av italiensk text. Vidare nämnde många av deltagarna i studierna att de uppskattade uppgifterna de gjorde och att de var positivt överraskade att de kunde förstå så mycket av italienska med hjälp av sina kunskaper i de olika språken. Vi språklärare kan hjälpa eleverna med att se nyttan av kunskaper i många olika språk för förståelsen av andra språk och skapa en positiv inställning till språkinlärning i allmänhet.