The Role of the Mother Tongue in Second and Third Language Acquisition

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ABSTRAKT

Tématem této bakalářské práce je vliv a důležitost mateřského jazyka při osvojování dalších jazyků. Celá práce je teoretická a je rozdělena do šesti kapitol. V první kapitole se zaobírá vysvětlením základních pojmů, jako je mateřský jazyk a druhý jazyk. Ve druhé kapitole popisuje osvojování druhého jazyka a strategie a koncepty, které s tím souvisí. Ve třetí kapitole jsou rozepsány procesy spojené s osvojováním druhého jazyka ovlivněné psychologií. Ve čtvrté kapitole popisuje osvojování třetího jazyka. Pátá kapitola pojmenovává faktory, které nás ovlivňují, pokud již umíme alespoň dva cizí jazyky. Poslední kapitola se zaměřuje na přenos prvků z jednoho osvojeného jazyka do dalšího.

Klíčová slova: mateřský jazyk, osvojování, druhý jazyk, třetí jazyk, multilingualismus

ABSTRACT

The topic of this bachelor thesis is the influence and importance of the mother tongue in the acquisition of other languages. The whole thesis is theoretical and is divided into six chapters. The first chapter deals with the explanation of basic concepts such as mother tongue and second language. The second chapter describes second language acquisition and the strategies and concepts involved. The third chapter discusses the processes involved in second language acquisition as influenced by psychology. Chapter four describes third language acquisition. Chapter five names the factors that influence us if we already know at least two foreign languages. The last chapter focuses on the transfer of crosslinguistic features from one acquired language to another.

Keywords: mother tongue, acquisition, second language, third language, multilingualism

I hereby declare that the print version of my Bachelor's/Master's thesis and the electronic version of my thesis deposited in the IS/STAG system are identical.

Contents

INTRODUCTION

This thesis focuses on how our mother tongue influences us in learning a foreign language, but also on subsequent production - what tendencies we have in word formation, sentence formation, how and why we look for similarities in languages, and what accent we subsequently have.

My main goal is to describe the theoretical concepts that describe Language Acquisition and to clarify in simple terms how a second language is acquired and why some students succeed more than others.

Chapter 1 provides an overview of the basic terminology, such as mother tongue, second language and SLA, that is later used through the thesis. Chapter 2 is more comprehensive and explains theoretical concepts such as Contrastive Analysis, Error Analysis, the concept of Interlanguage, Morpheme Order studies, Monitor Model and finally I describe the concept of Universal Grammar. Next, in Chapter 3, I get to describe the differences between students and why they may or may not excel in acquiring a new language faster or better than others.

In Chapter 4 I come to a description of third language acquisition and furthermore I get to the heart of the whole thesis. It is in this chapter where I discuss the influence of the mother tongue when learning other languages. Chapter 5 discusses what affects the non-native language influence, more precisely, I introduce the concept of Crosslinguistic Influence. Then I focus on language differences, describing the distance between languages and language families, which may also affect language acquisition.

In Chapter 6, which is the last chapter of my thesis, I focus on what can be transferred from one non-native language to another, namely lexis, phonetics and phonology, morphology and syntax.

1   INTRODUCING SECOND LANGUAGE ACQUISITION

As children, people automatically and without much thought begin to acquire at least one language, which linguists call L1. In the course of their lives, they may also acquire another language, perhaps as a result of early exposure to that language. It is also possible, however, that the children acquire the language consciously with effort and an attempt to educate themselves. This language is called L2 by linguists. (Saville-Troike, 2010, 1)

1.1   What are first and second languages

A first language is also known as a mother tongue, primary language and/or a native language, all synonyms. For the purposes of Second Language Acquisition, all of these synonyms are considered L1, a language that is acquired in early childhood, usually before the age of three by growing up in the company of people who speak the language. (Saville-Troike, 2010, 4)

The mother tongue is an important part of a child's personal and cultural identity. And it is this identification, which we acquire through the mother tongue, that promotes successful patterns of acting and speaking in the future. It is our mother tongue and our diverse social backgrounds that make us unique in society. The mother tongue is an instrument for the development of intellectual, physical and moral aspects of education. Moreover, it must be said that weakness or lack of knowledge of the mother tongue means paralysis of all thinking and expressive abilities. (Yadav, 2014, 573)

According to Gass and Selinker (2008, 21), the second language refers to any language learned in addition to a person's first language, although the concept is named second-language acquisition, it can also incorporate the learning of third, fourth, or subsequent languages.

Sometimes it is necessary to differentiate what function the second language will play in a person's life, as this will influence what and how they learn. (Saville-Troike, 2010, 3) According to Saville-Troike (2010, 3) there are four different names in the literature: *A second language* is often acquired by minority group members or immigrants who speak another language natively. *A foreign language* is one not widely used in the learners' immediate social context which might be used for future travel or other crosscultural communication situations, or studied as a curricular requirement or elective in school, but with no immediate or necessary practical application. *A library language* is one which functions primarily as a tool for further learning through reading, especially when books or

journals in a desired field of study are not commonly published in the learners' native tongue. *An auxiliary language* is one which learners need to know for some official functions in their immediate political setting, or will need for purposes of wider communication, although their first language serves most other needs in their lives. (Saville-Troike, 2010, 4)

1.2   What is Second Language Acquisition

Second Language Acquisition (SLA) refers both to individuals and groups learning a second language after they have acquired their first language as young children, or learning another language in general. This additional language is called L2, though it may be the third or fourth language. It is also commonly called a target language (TL) and it refers to any language that is the goal of learning. (Saville-Troike, 2010, 2)

The SLA is quite a recent subject. Although it would be difficult to pinpoint a "starting" date, it is certainly fair to say that the field of SLA research grew and advanced greatly for the past 40 years or so. (Gass and Selinker, 2009, 1) First of all, the scope of SLA includes formal L2 learning that takes place in classrooms, for example when a high school student in the United States takes a Spanish class or a lawyer in Canada takes a French language course. Secondly, informal L2 learning takes place in naturalistic contexts such as when a Japanese child is brought to the United States and picks up English in the course of playing and attending school with native English-speaking children without any other specialized language instruction. And lastly, L2 learning that involves a mixture of these settings. For example, a combination of these two takes place when an adult immigrant from Ethiopia in Israel learns Hebrew both from attending special classes and from interacting with co-workers and other residents in Hebrew. (Saville-Troike, 2010, 2)

Yadav claims that it takes six to eight years of language instruction to reach the level of reading and verbal proficiency needed for success in secondary school. Therefore, the children whose native language is not the medium of instruction must have developed the following skills in order to keep their mother tongue: reading skills, writing skills and exposure to positive parental attitudes. Additionally, he claims that having the mother tongue as the main language of instruction throughout primary school has no negative effects on children's capacity to learn a second or additional local language like English, French, or German. The cognitive and linguistic basis for learning new languages, such as English, is laid by fluency and literacy in the mother tongue. Children acquire a second language fast when they get formal education in their first language during primary school and then progressively switch to academic instruction in the second language. If they are given the

chance to continue learning their first language in secondary school, they will graduate as fully bilingual (or multilingual) students. (Yadav, 2014, 574) However, if children are forced to go from learning in their mother tongue to schooling in a second language abruptly or too soon, their first language acquisition may be hindered or even lost. More importantly, their enthusiasm in what they are learning and their self-confidence as learners may deteriorate, which could result in a lack of motivation, academic failure, and early school exit. (Yadav, 2014, 574)

1.3 Summary

In Chapter 1, I explained the basic concepts of this thesis - mother tongue and second language. I described the important role that mother tongue plays in each child's cultural and personal identity. I then pointed out the different perspectives of linguists (e.g. Yadav, Saville-Troike) on the concept of the Second Language. Finally, in Chapter 1.2, I explained the concept of SLA (Second Language Acquisition). At the end I described what TL (target language) is.

2   THE LINGUISTICS OF SECOND LANGUAGE ACQUISITION

This chapter begins with an explanation of early approaches to Second Language Acquisition (SLA), as well as contrastive analysis before moving on to numerous other concepts, such as error analysis, interlanguage, morpheme order studies, and the monitor model, which place an internal focus on language development of learners. This chapter ends with the explanation of universal grammar.

2.1   Contrastive Analysis

Contrastive Analysis (CA) is an approach to the study of SLA that involves predicting and explaining a student's problems based on a comparison of L1 and L2 in order to determine similarities and differences. (Saville-Troike, 2010, 35) According to Gass and Selinker (2009, 96), contrastive analysis is a method of comparing languages in order to identify possible mistakes with the goal of separating what must be learned from what does not have to be learned in a situation involving the learning of a second language.

CA was greatly influenced by theories that were popular in the 1940s and 1950s in American psychology and linguistics. The goal of CA was to increase efficiency in L2 teaching and testing. The focus of CA is on describing and comparing the languages one level at a time – generally contrasting the phonology of L1 and L2 first, then morphology, then syntax and lexicon. Early proponents of CA assumed that language acquisition involves habit formation through a process of Stimulus - Response - Reinforcement (S-R-R). Learners respond to stimuli they hear and then repeat them. When this response is reinforced, learning occurs. (Saville-Troike, 2010, 35)

Another assumption of this theory is that there will be transfer in learning. In the case of SLA, this refers to the transfer of features acquired in learning in L1 to the target L2. There are two types of this transfer. The first one is called a positive transfer and occurs when there is the same language structure in L1 and L2. For example, the transfer of a Spanish plural morpheme –s on nouns to English (trenes = trains). The second type is called the negative transfer and occurs when the L1 structure is used inappropriately in the L2, for example, the transfer of Spanish plural –s to a modifier in number agreement with the noun (lenguajes modernas = moderns languages). (Saville-Troike, 2010, 35)

There are also many of the L2 problems that CA predicts do not emerge: CA does not take into account a significant portion of learner errors and much predicted positive transfer does not occur. The fact that instructional materials created using this methodology

are language-specific and inappropriate for usage with speakers of diverse native languages has been a significant barrier in application to education. (Saville-Troike, 2010, 35)

Nevertheless, CA stimulated the creation of numerous comparative grammars (including numerous unpublished master's theses and doctoral dissertations at universities all over the world), and its analytical techniques have been effectively used in descriptive research and translation, including computer translation. Additionally, there has been a more recent resurrection and reform of CA methodologies, which now incorporate language comparisons at more abstract levels and an expansion of the analysis' domains to include rhetoric and cross-cultural communication. (Saville-Troike, 2010, 35-36)

2.2   Error Analysis

Error Analysis (EA) is the first method for studying SLA that places an internal emphasis on learners' creative ability to construct language. Instead of relying on idealized linguistic structures attributed to native speakers of L1 and L2, it is based on the description and analysis of actual learner errors in L2 (as in CA). By the early 1970s, EA largely replaced CA as a result of the following developments: As shown above, CA's predictions did not always come true in terms of learner errors. Perhaps more significantly, many actual learner mistakes could not be attributed to the shift from L1 to L2. There has been a change in how language acquisition is explained, with more focus on the learner's innate capacities than on external influences. Errors indicate that a learner is (perhaps unintentionally) experimenting with the new system as opposed to just experiencing "interference" from the old habits. (Saville-Troike, 2010, 37-38)

The procedure for analyzing learner errors includes the following steps according to Ellis (1994, 373-377): collection of a sample of learner language, identification of errors, description of errors, explanation of errors, evaluation of errors, ambiguity in classification, lack of positive data and potential for avoidance.

EA is still a helpful method for studying SLA, but there are several drawbacks that need to be taken into consideration. These consist of: ambiguity in classification, then lack of positive data and lastly potential for avoidance.

Let me provide you with an example of ambiguity in classification. As Chinese is not an inflectional language, it can be difficult to determine whether a Chinese L1 speaker's omission of number and tense inflections in English L2 is due to L1 influence or to a universal developmental process that leads to shortened utterances. As for the lack of positive data, focusing only on mistakes may not always reveal what the L2 learner has

learned, as right applications may be missed. And finally, the potential for avoidance will not be revealed by EA, as Schachter (1974, 205-214) points out that Chinese and Japanese L1 speakers make few errors in English L2 relative clauses because they avoid employing them. From this absence of errors, we can see that the learners avoid challenging structures.

2.3   Interlanguage

Larry Selinker introduced the term Interlanguage (IL) in 1972, to refer to the transitional state or transitional grammar of a person learning a second language. Selinker considered interlanguage as a creative process that is influenced by environmental factors.

An interlanguage is a language created by an L2 learner that contains some features of their first language, but also contains some speaking and writing rules from the second language. Interlanguage is based on Larry Selinker's theory that there is a psychological part of the brain that is activated by trying to learn another language. (Saville-Troike, Muriel, 2010, 41)

According to Saville-Troike (2010, 41), interlanguage has the following characteristics: systematic, which means that at any point of development, the interlanguage is governed by rules which constitute the learner's internal grammar. Then, dynamic, which simply means that the system of student's rules in their mind changes frequently. Next, variable, which suggests that although the interlanguage is systematic, differences in context lead to different patterns of language use. And finally, reduced, which refers to the less complex grammatical structures that typically occur more frequently in an interlanguage compared to the target language (e.g. omission of inflections, such as the past tense suffix in English).

Selinker also came up with the concept of fossilization, which is the probability that learners will cease their interlanguage development too soon before they reach target language norms. This phenomenon is age-related, older L2 students have a higher chance of fossilization than younger ones. (Saville-Troike, 2010, 42)

The beginning and end of interlanguage are not clearly defined, although it is considered to be the moment when the learner first attempts to express meaning in the L2 or when there is some evidence of a systematic change in grammar. The initial state and very early stages of L2 development in naturalistic environments often involve only isolated L2 words or memorized routines. (Saville-Troike, Pan, and Dutkova, 1995, 125-149) And it is even more difficult to determine the end of interlanguage because additional time and certain circumstances can restart the learning process at any time.

Here are some examples of statements made by children who have just started learning English (Saville-Troike, 2010, 42):

(1)　　Chinese L1: *Zheige* delicious. = 'This is delicious.'
　　　　Navajo L1: Birthday cake *deed a a'*. = 'We ate a birthday cake.'

2.4　　Morpheme Order Studies

Is there a natural order in the grammatical development of L2 learners? This is a crucial question in the study of SLA. This is intriguing because, if we discovered that the same L2 components are learnt first regardless of the learner's L1, we might assume that transfer from L1 is less significant than if we discovered that the order of acquisition is different for speakers of different native languages. The further implication is that the acquisition processes may be much the same for all language development if the same order of learning in L2 as in children's L1 acquisition is found. However, both from linguistic and cognitive perspectives, the idea of natural order continues to be crucial for understanding SLA. (Saville-Troike, 2010, 44)

In 1973, Roger Brown provided the first baseline information on an L1 acquisition sequence by observing the progression of three children as they acquired the production of a set of grammatical morphemes in English, such as inflections that indicate tense on verbs and plural number on nouns. His results indicate, for example, that the progressive suffix -ing and plural -s are the first of this group of morphemes that both L1 and L2 English learners master. The irregular past tense form of verbs and possessive -s, on the other hand, are acquired next for L1 learners but relatively later for L2 learners (after forms of be and a/the). The experiments on morpheme acquisition were followed by studies showing that both children and adults learn some syntactic constructs in predictable sequences (e.g. negation, questions, and relative clauses). These results contribute to the growing theory that innate mechanisms for language acquisition may not just exist in young children. (Saville-Troike, 2010, 43)

2.5　　Monitor Model

The Monitor Model (or Monitor Hypothesis), introduced by Stephen Krashen in 1978, is one of the final early methods of SLA with an internal focus. The Monitor Hypothesis tries to

reveal how learning and acquisition are used and attempts to explain how these processes work. (Gass and Selinker, 2009, 241)

The Monitor Hypothesis states that that the roles of the learning system and the acquisition system are distinct. Krashen makes the point that only the "acquisition system" can serve as the production mechanism for language use and directly encourage the development of language competence, whereas the "learning system," which results from conscious knowledge of the language structure, can only serve as a monitor in language use and is not part of language competence. Three conditions are needed, but not sufficient, for the monitor roles to be activated: First is sufficient time, meaning that language users must have enough time to choose and apply grammar rules properly. Second is focus on form, meaning that language users must pay attention to the language's form by taking its appropriateness into account. Third, know the rules, meaning that language users must be familiar with its grammar rules and use conventions. (Gass and Selinker, 2009, 241)

Krashen claims that users of optimal monitors only use them "when it is appropriate and when it does not interfere with communication" (Krashen, 1982, 20). Additionally, this theory has greatly aided the teaching of second languages throughout the world, and some efficient teaching techniques have been developed based on his central hypotheses for helping students better pick up a second language. (Krashen, 1982, 20)

Krashen's Monitor Model has been widely criticized, yet it has contributed significantly to the study of second language learning and second language education. (Saville-Troike, 2010, 45)

2.6   Universal Grammar

In the 1980s, new ideas in Chomskyan theoretical linguistics were about to have a significant impact on the study of SLA, and Universal Grammar (UG) was about to become (and still is) the dominant internal-focus method. UG continues the tradition established by Chomsky in his previous work. Particularly, there are two crucially important concepts: First, linguistic competency, or speaker-hearers' underlying linguistic knowledge, needs to be taken into consideration in language acquisition. This is distinct from speaker-hearers' actual use of language in particular contexts, or linguistic performance. Second, this level of language proficiency goes above and beyond what can be learnt from one's environment. This is the logical issue with language learning, sometimes known as the inadequate stimulus argument. (Saville-Troike, 2010, 46-47)

Since the 1950s, Chomsky and his supporters have argued that the nature of speaker-hearers' competence in their native tongue is innate knowledge that the human species is genetically gifted with. They claim that children (at least) approach learning a new language with a basic understanding of the characteristics shared by all languages, such as the limitations on the possible structures of all natural languages. This innate knowledge is what Chomsky calls the language faculty, described as "a component of the human mind, physically represented in the brain and part of the biological endowment of the species" (Chomsky, 2002, 1). What all languages have in common is Universal Grammar.

Followers of this method believed that the work of language acquisition involved children inducing a set of rules for specific languages from the input they received, guided by UG. (Linguistic input enters a "black box" in the mind; a process takes place, and the grammatical structure of a certain language comes out.) This belief persisted until the late 1970s. A significant shift in thinking about the acquisition process occurred with Chomsky's reconceptualization of UG in a Principles and Parameters framework. (Saville-Troike, 2010, 47)

2.7   Summary

At the beginning of Chapter 2.1 I briefly explained the Contrastive Analysis, which is a concept based on a comparison of L1 and L2 in order to determine similarities and differences. I then gave examples on the concepts of positive and negative transfer, which is related to Contrastive Analysis. In Chapter 2.2 I introduced you to the concept of Error Analysis, which is based on the description and analysis of actual learner errors in L2. I also described a step-by-step procedure for analyzing student's errors. Later I described some of the drawbacks we need to consider and gave examples for all of them. In the next subchapter I came to the term Interlanguage, which describes the state of grammar of a person who is learning a second language. I described all of its features and also the concept of fossilization. In the next subsection I discussed Morpheme Order studies, which address the question of whether there is a natural order of grammatical development for L2 learners. In the Monitor Model subsection, I briefly described Stephen Krashen's hypothesis from the late 1970s, which attempts to describe learning and acquisition and all their processes. In the last subsection I described not only the notion of Universal Grammar, but also two of its essential concepts: Linguistic competency and level of language proficiency.

3 THE PSYCHOLOGY OF SECOND LANGUAGE ACQUISITION

In this chapter I explain several approaches to SLA that have been heavily influenced by the field of psychology. First I focus on learning processes, including information processing, automaticity and restructuring, after that I briefly explain what connectionism is. Afterwards I focus on basic differences between learners, and I finish this chapter with mentioning the effects of multilingualism.

3.1 Learning Processes

Questions about the phases and sequences of acquisition are part of the study of learning processes, which is particularly influenced by the Information Processing (IP) and Connectionism frameworks. The primary concern of this focus is acquisition. (Saville-Troike, 2010, 26-27)

3.1.1 Information Processing, automaticity and restructuring

Following an approach created by John Anderson in 1976 and 1983, Information Processing (IP) had more of an impact on the study of SLA than any other psychological perspective. It asserts that learning a language is fundamentally similar to acquiring other fields of knowledge, and that whether someone is learning mathematics, or learning to drive a car, or learning Japanese, they are not engaging in any essentially different kind of mental activity.

IP-based methods focus on the mental processes required for language acquisition and use. These include perception and the input of new information; the formation, organization, and regulation of internal (mental) representations; and retrieval and output strategies. According to Saville-Troike (2010, 74), learning of a skill initially demands learners' attention, and thus involves controlled processing. As we start to learn a second language, our mental capacity requirements for controlled processing are clear since we need to focus our attention in order to comprehend or produce basic vocabulary and grammatical structures. Controlled processing prevents associations from forming because of repetitive use. Instead, attentional control is required. (Gass, Selinker, 2009, 232) We can only focus on more sophisticated, higher-order features and content once they have been automated. (Saville-Troike, 2010, 73)

Some other terms to be described, are automaticity and restructuring - two ideas that are crucial to the learning and use of second languages. Automaticity describes having control over one's linguistic knowledge (number of skills from perceptual, cognitive, and

social domains). The more frequently those abilities are employed, the easier it is to use them.

There are several ways to understand automaticity, but the most important one is that it involves quick, unconscious, and effortless processing. Automatization may happen when there has been a persistent and regular relationship between a particular type of input and a particular pattern of output. This can be seen in the rather automatic exchange between two people when they approach one another while walking down the hallway. (Saville-Troike, 2010, 73-74)

(2)   Speaker 1: Hi.
        Speaker 2: Hi, how are you?
        Speaker 1: Fine, and you?
        Speaker 2: Fine.

The routine of speech in a language one is familiar with is so automatic that most people have had the experience of replying appropriately both before the question is even posed and when it turns out that a different question is being posed, as in the following example:

(3)   Speaker 1: Hi, Sue.
        Speaker 2: Good morning, Julie.
        Speaker 1: Fine, and you?

Crookes (1991, 113-132) talks about the need of organizing and paying attention to one's speech. A learner "decides" what to say and what structures to utilize at the level of planning (for example, preplanning an utterance). In other words, a student has some control over the structures that will be employed and afterwards practiced. Decisions about what to practice are significant in determining future language use, assuming that practice is a step toward ultimate automatization.

On the other hand, restructuring is the process of altering internalized representations as a result of new learning. Restructuring-related changes are abrupt or qualitatively distinct from earlier stages. Learning means the addition of new knowledge, which needs to be organized and structured. An existing second language system must be somehow reorganized in order to include new knowledge into it. This results in the creation of a

(somewhat) new second language system. Restructuring doesn't just mean putting in new things. (Gass, Selinker, 2009, 230) Rearranging mental models as part of learning results in better coordinated, integrated, and effective structures, as well as a quicker reaction time when they are triggered. (Saville-Troike, Muriel, 2010, 74)

When considering second language learning from the standpoint of these ideas, an underlying presumption is that humans only have a finite processing capacity. The capacity to pay attention to, interact with, and arrange new information is essential for information processing. The more that can be handled routinely—that is, automatically—the more attentional resources are available for new information due to the limited processing capacity that people have. For communication to be effective, processing resources must be distributed wisely. Or, to show it on an example, trying to read a challenging academic piece of text while simultaneously watching TV is less effective. Too much time is spent on the TV and not enough on the article. Reading and comprehending an item takes less time when there are no competing demands on our time (such as when doing so in a quiet library). (Gass, Selinker, 2009, 230)

Learners go from controlled to automatic processing with practice. Automatic processing requires less mental "space" and attentional effort. (Saville-Troike, Muriel, 2010, 83)

3.1.2   Connectionism

Connectionism is another cognitive framework for the emphasis on the learning processes that emerged in the 1980s and has gained significant influence. It differs from the majority of other current frameworks for the study of SLA in that it does not believe that learning a language involves either innate knowledge or abstraction of rules and principles, but rather that language learning results from growing associations (connections) between stimuli and responses. (Saville-Troike, Muriel, 2010, 27) In other words, according to Gass and Selinker (2009, 220), learners are able to extract regular patterns from the information to create and strengthen associations, although they might not be aware of it.

3.2 Individual Learner Differences

Why some learners succeed more than others has been the main topic of SLA's attention to learner differences. It must be taken into account how emotions are involved in learning,

including affective factors of aptitude or motivation. Additionally, this approach takes into account biological differences associated with age and sex, as well as some processing-related variations.

3.2.1 Age

It is a frequent misconception that children are better at learning a second language than adults, but the evidence for this is rather ambiguous. Some studies define relative "success" as initial pace of learning (where, contrary to popular assumption, older learners have an advantage), while other studies define it as ultimate achievement, which could be one explanation for the seeming contradiction in research findings (where learners who are introduced to the L2 in childhood indeed do appear to have an edge). Also, some studies define "success" in terms of how closely a learner approximates native grammaticality judgments, others in terms of how closely a learner approaches fluency or functional competence. (Saville-Troike, Muriel, 2010, 82)

According to Gass and Selinker (2009, 405) it is a popular belief that children learn languages more effectively than adults since they can typically grasp a second language while adults cannot. What is known as the Critical Period Theory (CPH) reflects this. The CPH is defined as follows by Birdsong (1999, 1): "the CPH states that there is a limited developmental period during which it is possible to acquire a language, be it L1 or L2, to normal, nativelike levels. Once this window of opportunity is passed, however, the ability to learn language declines". Despite the fact that the term "CPH" is frequently used by researchers, it is crucial to remember that it is somewhat misleading.

The formulation of the CPH was first proposed Lenneberg (1967, 176), who noted that "automatic acquisition from mere exposure to a given language seems to disappear [after puberty], and foreign languages have to be taught and learned through a conscious and labored effort. Foreign accents cannot be overcome easily after puberty." However, in their study of the naturalistic acquisition of Dutch by three groups of English-speaking individuals (children, adolescents, and adults) in 1978, Snow and Hoefnagle-Hohle discovered that while children performed worse on tests given after three months of residence in the Netherlands, they largely caught up after 10 months. This discovery raises a lot of questions, for instance, did children or the older groups somehow change the way in which they went about learning Dutch? (Gass and Selinker, 2009, 406)

Results show that at least during the initial phases of acquisition, adults are able to reach criteria scores on most tests of second language learning more quickly than children.

The language skill required also matters because older students' capacity to pick up phonology seems to fade quite quickly. (Gass and Selinker, 2009, 406-408)

According to Saville-Troike, advantages that children may have are brain plasticity and being less inhibited than older learners. Also, children are more likely to hear simplified language from others, which may help them learn. Advantages that older learners may have include higher levels of pragmatic abilities and L1 knowledge which may translate positively to L2 use. They are better equipped to handle activities that are considerably more complicated even when their linguistic resources are still restricted. Saville-Troike (2010, 82)

3.2.2 Sex

Several western societies have the common idea that women tend to be better L2 learners than men. However, this belief is likely a social construct, based on results that reflect cultural and sociopsychological restrictions and influences. There do appear to be some sex differences in language acquisition and processing, but the research evidence is mixed. For example, women outperform men in some tests of verbal fluency (such as finding words that begin with a certain letter), and women's brains may be less asymmetrically organized for speech than male brains. (Kimura, 1992, 119) Females appear to be better at memorizing complicated forms, whereas males appear to be better at computing compositional rules. (Saville-Troike, Muriel, 2010, 84)

Other differences may be related to hormonal variables. A higher level of testosterone is associated with more automatized skills, while a higher level of estrogen is associated with better semantic/interpretive skills (Mack, 1992). According to Kimura (1992, 119), women with higher amounts of estrogen during the menstrual cycle had higher levels of articulatory and motor competence.

3.2.3 Aptitude

For many years, it has been widely believed that learning languages requires a special aptitude. Carroll (1965, 87-136) theorized the following four elements as the foundations of this gift, and they serve as the basis for the majority of aptitude tests: Phonetic coding ability, inductive language learning ability, grammatical sensitivity and associative memory capacity.

Phonemic coding ability is the capacity to break down auditory data into parts that may be stored and retrieved. It is particularly important at very early stages of learning when

this ability "is concerned with the extent to which the input which impinges on the learner can become input that is worth processing, as opposed to input which may simply be an auditory blur or alternatively only partially processed." (Skehan, 1998, 203) In other words, input might not lead to intake if the hearer is unable to break down the incoming speech stream into phonemes in order to detect morphemes. Inductive language learning ability and grammatical sensitivity are both central processing-related issues. They take into consideration the brain's additional processing of the segmented auditory information to infer structure, identify patterns, make generalizations, understand the grammatical function of elements, and create rules. The storage, recall, and use of linguistic components in output are all crucial aspects of associative memory capacity. Speaking fluency is ultimately determined by associative memory capacity, which chooses the proper L2 items to store. (Saville-Troike, 2010, 85)

In summary, the idea of language-learning aptitude is the belief that having different levels of these abilities predicts different levels of success in L2 acquisition. While coming to the conclusion that individual capacity may vary by factor, Skehan (1998, 209) examines relevant data that mostly supports this premise. For instance, a student who excels at grammar sensitivity may struggle with associative memory, or vice versa. Success in L2 learning does not require talent in all areas. Some successful students possess strong linguistic-analytical skills, while others have strong memory skills.

3.2.4   Motivation

Individual motivation is another aspect that is commonly mentioned to explain why some L2 learners succeed more than others. The amount of effort that learners put out at different stages of their L2 growth is primarily determined by their motivation, which is frequently a key to their degree of success. (Gass and Selinker, 2009, 426)

Although there are many other ways to define motivation, it is typically thought of as a construct that contains at least the following elements: significant goal or need, desire to attain the goal, perception that learning L2 is relevant to fulfilling the goal or meeting the need, belief in the likely success or failure of learning L2 and value of potential reward. (Dörnyei, 2001, 21)

There are two widely recognized types of motivation: integrative and instrumental. Integrative motivation is based on an interest in learning L2 out of curiosity or a desire to interact with those who use it (for example, for romantic reasons). Or out of an intention to participate in or integrate in the L2-using speech community; in either case, affective or

emotional factors are predominate. The notion of purely practical benefits of learning the L2, such as expanding career or economic options, elevating status and authority, gaining access to scientific and technical information, or just passing a course at school, are examples of instrumental motivation. (Saville-Troike, 2010, 86) In terms of achieving L2 proficiency, neither of these orientations offers a clear advantage over the other.

Recent developments in SLA theory (Schumann 1997, 2001) suggest that neural mechanisms regulate motivation for second language acquisition as well as L2 representation and processing. Our brains' "stimulus appraisal" process, which evaluates the motivational value of events and other inputs, impacts how we will react, including our attitudes and, ultimately, how much effort we will make.

Rarely, the potential power of motivation can be seen in cases where older learners may overcome the "odds" of not acquiring native-like pronunciation - if sounding "native" is perceived to be important enough. (Saville-Troike, 2010, 86)

3.3 The Effects of Multilingualism

For many years, researchers have speculated about and studied the potential benefits and drawbacks of multilingualism in respect to other cognitive abilities or processes. Over time, the relative importance of positive versus negative impressions of the relationship has changed, and this change can be attributed equally to philosophical and political considerations as to scientific discoveries.

Philosophically, the idea that learning multiple languages has a positive impact on cognitive development has historically been linked to the idea that doing so "trains the mind". This idea is still widespread in many parts of the world where multilingualism is seen as a necessary quality of "educated" and "cultured" people. The opposing idea, that speaking multiple languages negatively affects general intelligence, reached its pinnacle in US-based research on immigrants during the 1930s. This research was driven by the rising xenophobic isolationist political sentiments of the time and was based on the low scores of immigrants who spoke multiple languages fluently on the standardized intelligence tests that were then becoming widely used. The point that these examinations were being given in a language that the subjects did not speak fluently or comprehend well, and that they were not being tested in their home languages, was not raised until some years later. (Saville-Troike, 2010, 93)

According to "measures of conceptual development, creativity, metalinguistic awareness, semantic development, and analytic skills," (Diaz, 1985, 18) research conducted

since the 1960s has mainly confirmed arguments that multilingualism has good benefits on intellectual functions.

The list of conclusive findings includes for instance that bilingual children show consistent advantages in tasks of both verbal and nonverbal abilities and advanced metalinguistic abilities, especially manifested in their control of language processing. In addition, cognitive and metalinguistic advantages appear in bilingual situations that involve systematic uses of the two languages, such as simultaneous acquisition settings or bilingual education.

The cognitive effects of bilingualism appear relatively early in the process of becoming bilingual and do not require high levels of bilingual proficiency nor the achievement of balanced bilingualism. Bilingual children have advantages in the use of language for verbal mediation, as shown by their higher frequency of private-speech utterances and their larger number of private-speech functions. (Diaz and Klingler, 1991, 184)

Negative claims about multilingualism are mostly focused on capacity limitations for language acquisition. There is evidence that simultaneous bilingualism in childhood may lead to a narrower range of lexical development in either language and that intensive and ongoing use of L2 may reduce accessibility of L1. However, the stability of multilingualism among communities around the world shows that any limitations may not be biological in nature. The most interesting aspect of this is that multilinguals behave differently when performing cognitive tasks, regardless of whether the evidence is positive or negative (and it is typically positive). The ability to speak more than one language allows a person to view the world from a variety of perspectives. According to Cook (1992, 565), "Both negative and positive effects are signs that L2 users think differently from monolinguals[...] Multicompetence is a different state of mind". Accounting for the differences remains one of the most exciting challenges for psychological approaches to SLA. (Saville-Troike, 2010, 94)

3.4 Summary

In Chapter 3.1, I started describing Learning Processes, first (IP) Information Processing and the concepts of automaticity and restructuring. I then moved on to the concept of Connectionism, which deals with learning and outcomes from growing associations. In Chapter 3.2, I focused on the categories of differences and how this may or may not affect the acquisition of other languages. I finished with Chapter 3.3, where I looked at people who

can speak several languages through acquisition and discuss the positive and negative effects on their intellect.

4   INTRODUCING THIRD LANGUAGE ACQUISITION

Because all individuals have the ability to acquire and speak more than two languages, they are all actual or potential multilingual learners and speakers at any given period in their life. Indeed, humans are multilingual by nature, with the option of being monolingual or bilingual depending on factors such as educational and social background, personal interest, individual motivation, and so on. (De Angelis, 2007, 2) In this chapter I discuss third language acquisition and the influence of the mother tongue or another language on this third language.

4.1   From Second Language to Third Language

Only recently have researchers begun to wonder whether differences in second and third language acquisition should be predicted a priori, or if the divide should be kept as a difference between native versus non-native acquisition and/or child versus adult acquisition. In either case, there is no need to separate the acquisition of a second language from that of a third (or more) language(s), because the second and third languages are both non-native, and the age of acquisition can be controlled regardless of the number of languages. In fact, until about a decade ago, most L2 acquisition researchers focusing on morphosyntax did not distinguish systematically between L2 and L3 acquisition, as many so-called L2 studies included both L2 learners and multilingual participants. However, much research over the last decade has argued and demonstrated that L2 and L3 acquisition are significantly different processes, particularly in terms of how previous linguistic experience unfolds in the early stages and the eventual impact on development over time. (Puig-Mayenco, Alonso, Rothman, 2018, 9)

The majority of available studies focused on the acquisition of the first or second language, while studies on the acquisition of languages other than the L2 are rarely mentioned and mostly absent. These reviews then inform us that the majority of what we know about language acquisition does not extend beyond the L2, implying that our understanding of how non-native languages are acquired is, at best, partial and incomplete. Most academics agree that a general theory of non-native language acquisition cannot be based solely on L2 learner behaviour. A general theory must be able to explain how the mind operates when two or more languages are involved, and it must be based on knowledge and understanding of how the mind acquires, treats, stores, organizes, and uses all linguistic

information available to the learner, not just information belonging to the first or second language.

If one were to claim that learning a first language is not significantly different from learning a second, a chorus of objections would quickly rise - and rightly so. Many arguments would be advanced, ranging from the importance of learners' age for acquisition to differences in cognitive maturity, the presence or absence of prior knowledge in the mind, and so on. In contrast, stating, implying, or assuming that the acquisition of a second language is not significantly different from the acquisition of a third or additional language does not appear to cause much controversy among scholars and frequently goes unchallenged. What are the causes of this difference? (De Angelis, 2007, 4)

Third (or additional) language acquisition (L3) has emerged as a distinct area of study within multilingualism. As a result, L3 acquisition is defined as the learning environment for learners "with prior experience of acquiring one or more non-native languages". (Hammarberg 2018, 128)

4.2   From Bilingual to Multilingual Memory

Bilingual memory research has primarily focused on determining how bilinguals' languages are stored in the mind, as well as the relationship between the lexicons of the first and second languages. (De Angelis, 2007, 88) This section covers the significant advances in bilingual memory research that have had the most influence on work on multilingualism lexical organization.

De Angelis mentions Weinreich, who proposed in 1953 that the relationship between bilinguals' languages can differ depending on how word meanings and word expressions are linked to one another. The languages of bilinguals can form a coordinate, compound, or subordinate relationship. In coordinate bilingualism, signified and signifier are kept separate so that two expressions are related to two distinct concepts. In compound bilingualism, two expressions are combined and linked to a single concept. And finally, in subordinate bilingualism, one language is subordinate to the other, resulting in one language dominating the other. (De Angelis, 2007, 88)

These forms of connections, according to Weinreich, are not mutually exclusive because several types of bilingualism can coexist within an individual. Some words can develop a compound relationship with one another, but others can form a coordinate or subordinate relationship. The author did not provide any information about the type of link

that languages existing in the mind may come to form with languages acquired later in life, according to Singleton. He explores the hypothetical example of a coordinate bilingual acquiring a third language and wonders, "If the new language initially develops a subordinate relationship with one of the existing languages, to which language would it be subordinate?" (Singleton, 2003, 167-176) He then goes over the following two options. The first is that the closest languages create a coordinate relationship with one another, and the second is that the new language's lexicon develops variable linkages of varying strength with the existing lexicons, which is the position Singleton appears to favour. (De Angelis, 2007, 89)

De Angelis also described and distinguished lexical and conceptual representation. The transition from lexical to conceptual representation requires the development of direct conceptual links between L2 words that were previously linked to L1 terms via lexical links. The original lexical links, on the other hand, do not vanish completely and continue to impact how the L1 and L2 remain connected, with the presence of these former lexical links causing the connection between the L1 and L2 to be greater than the connection between the L2 and the L1. De Angelis referred to Kroll and Stewart, who investigated this idea in three independent studies. The tasks and materials used in the studies ranged from picture naming and multilingual translations to randomized and semantically categorized word lists. The general goal of these studies was to compare translation speed in two opposite directions: from the L1 to the L2, and from the L2 to the L1. As predicted, translating from the L1 to the L2 did not occur at the same rate. It was discovered that translating from the L1 into the L2 is substantially faster than translating from the L2 into the L1. The authors concluded that the links between the two languages do not appear to be equally strong, and that translating from the L1 into the L2 is conceptually mediated, but translating from the L2 into the L1 is lexically meditated. (De Angelis, 2007, 91)

This model was not extended to multilingual speakers. Given what we know about multilingualism today, one can easily imagine testing this model with multilingual speakers. For example, if translating from L1 to L2 is conceptually mediated but translating from L2 to L1 is lexically mediated, would translating from L2 to L3 also be lexically mediated? And how will the type of mediation evolve when skill in non-native languages improves or deteriorates over time? How might elements like typological proximity and language similarity, which are already known to facilitate the path of cross-linguistic influence across non-native languages, affect translation speed? Consider the situation of a trilingual speaker who speaks German as their mother tongue and Spanish and Italian as non-native languages.

One could argue that because the two Romance languages are so similar, translating from and to non-native languages may be faster than translating from and to native and non-native languages. De Angelis cannot provide any answers without empirical data, but this is one illustration of how the diverse linguistic backgrounds of multilinguals can provide useful information about the dynamic interactions that govern the interactions between the lexicons of various languages. (De Angelis, 2007, 92)

4.3   Summary

In this chapter I came to the notion of L3 (third language), to all who can learn more than two languages and, of course, to the influence of the mother tongue on the acquisition of this third language. First, I described the shift from second language to third language and the different kinds of divisions - whether to look at the situation from the perspective of native versus non-native language, or from the perspective of child versus adult. At the same time, I explained that the acquisition of a second and then a third language are two completely different things.

In Chapter 4.2, I covered the significant advances in bilingual memory research that have had the most influence on work on multilingualism lexical organization.

5   FACTORS AFFECTING NON-NATIVE LANGUAGE INFLUENCE

This chapter is primarily concerned with transfer phenomena in the oral and written production of multilinguals. In Chapter 5.1, I deal with the concept of crosslinguistic influence (CLI) and describe its impact on languages. In the second subchapter I deal with the language distance between closely and widely related languages. The goal of this chapter is to examine studies on CLI and multilingualism, focusing on behaviours that can only occur when at least three languages are in the mind.

5.1   Non-native Languages and Crosslinguistic Influence

Crosslingustic influence (CLI) research attempts to explain how and under what circumstances prior linguistic knowledge influences the production, comprehension, and development of a target language. Crosslinguistic influence was coined in the mid-1980s as a theory-neutral word for the various kinds of influences that can occur on the target language, such as "transfer, interference, avoidance, borrowing, and L2 related-aspects of language loss". (Sharwood-Smith and Kellerman, 1986, 1) Crosslinguistic influence, according to Sharwood-Smith, is "the influence of the learner's mother tongue on the learner's performance in and/or development of a given target language; by extension, it also *"means the influence of any "other tongue" known to the learner on that target language.*" (Sharwood-Smith, 1994, 198, italic in the original). Odlin, for example, defines CLI as "the influence resulting from similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired." (Odlin, 2006, 27) According to Gass and Selinker, "for most researchers, language transfer is the use of native language (or other language) knowledge – in some as yet unclear way – in the acquisition of a second (or additional) language." (Gass, Selinker, 1983, 372)

We can infer from these definitions and remarks that researchers have commonly considered non-native languages to be potential sources of transfer since the 1960s. Given the passage of time, one would expect to find a significant number of studies on non-native language impact in the literature, but this is not the case. Empirical studies on non-native language influence are uncommon and far less frequent than studies on native language influence.

More empirical data on CLI and multilingualism will surely aid us in moving beyond L1 impact and toward a wider understanding of CLI phenomena, whether concerned with

native or non-native languages. In reality, there are several advantages to conducting research with multilinguals.

Transfer is traditionally regarded as a process involving two languages: a source language and a target language. The earlier CLI definitions obviously reflect this viewpoint, as transfer is described as a process that occurs between an L1 and an L2, an L2 and an L3, or an L2 and an L1, and so on. The chance that the source of the influence is more than one language is not considered and, as a result, is not included in any of the definitions examined. But does this mean that simultaneous impact of multiple languages is not possible, or that conventional views of transfer are too rigid in conceptualization and thus insufficient to account for multilingualism-specific phenomena? The latter is thought to be the most likely. Transfer as a one-to-one association is a logical and viable choice for speakers who are familiar with two languages, but it is no longer the only option when more than two languages are in the consciousness. There are at least two types of CLI that are technically possible in this situation. The first is the influence between the source and target languages, which is the previously stated one-to-one type of association; the second is the simultaneous influence of multiple languages on a target language, which is a many-to-one type of association. The second type of CLI happens when two or more languages interact and agree to influence the target language, or when one language influences another, and the already influenced language influences another language in the process of being acquired. (De Angelis, 2007, 21)

5.2   Language Distance

There is widespread agreement among researchers that transfer is more likely to occur between closely related languages than between widely related languages. (De Angelis, 2007, 22) Language distance is the distance between languages and language families that a linguist can objectively and formally describe and identify.

Formal similarity is sometimes used to refer to a relationship of similarity between the features or components of two or more languages that does not necessarily indicate a genetic relationship between them.

Let us now look at the empirical evidence on language distance in three different contexts: First, when learners have knowledge of related and unrelated languages. Second, when learners have knowledge of languages belonging to the same language family but not

to the same subgroup within the family. And third, when learners have knowledge of languages belonging to the same family and to the same subgroup within the family.

Several studies compared Indo-European and non-Indo-European languages in terms of having knowledge of related and unrelated languages. In terms of African languages, De Angelis mentions Ahukanna et al., who discovered in 1981 that Igbo L1 informants depended heavily on the English L2 while learning the French L3. Because English and French are members of the same Indo-European family, but Igbo is not, it was evident that learners found information in the language closest to the target language. (De Angelis, 2007, 27)

The evidence in the case of knowledge of languages in the same family and the same subgroup within the family indicates the following two general tendencies. First, learners continue to rely on languages that are more closely connected to the goal, whether they are first or second languages. Second, learners no longer choose one language as their primary source of knowledge and may rely on multiple languages at the same time. With respect to the first tendency, De Angelis mentions Chandrasekhar who found that her Hindi L1 informants relied on their knowledge of English as an L2 when acquiring German as an L3. (De Angelis, 2007, 28)

This brings us to the most difficult issue of all: predicting multilingual behaviour when numerous languages from the same family and subgroup within the family are in the mind. Consider the following scenario: a speaker who is fluent in five Romance languages and is studying a sixth. With this language background, predicting which of the languages already in the mind is most likely to become the learner's preferred source of information during the acquisition process would be difficult. Other criteria must be considered in order to provide a reasonable prediction. De Angelis mentions Williams and Hammarberg's idea to use typology, proficiency level in each language, recency of use of all language, and L2 status as predictive tools. This proposal was proved useful and correct with only some language combinations, so there are other factors likely to be involved. De Angelis, for example, investigated the Italian oral production of a French-Canadian L1 speaker who previously studied Spanish as a second language. Because the informant had not used Spanish in 30 years and claimed not to be fluent in it, French was predicted to emerge as the primary source language. French scored the highest on the four conditioning variables indicated by Williams and Hammarberg's approach. However, French was not the speaker's primary source of information; in fact, the learner did not rely on her French L1 at all, instead relying on her limited and rusty grasp of Spanish as a second language. Because Spanish,

French, and Italian are all Romance languages, it's strange that a rusty L2 (Spanish) that hasn't been spoken in thirty years would override the French native language and become the dominant source of information. Other variables must have influenced the speaker's decision. De Angelis explains this unique data by proposing the existence of two interacting limitations that work together to block native language influence in favour of non-native language influence. These two restrictions are perception of correctness and association of foreignness. In summary, perception of correctness predicts that multilinguals will resist absorbing L1 information into the target language since L1 material is regarded to be wrong from the start, resulting in a higher acceptance level for non-native words into the target language. The cognitive relationship that learners form between non-native languages that are given the common status of 'foreign languages' is referred to as association of foreignness. When numerous languages connected to each other are in the mind, this cognitive association favours the use of non-native language words over native language words since foreign languages are often thought to be closer to each other than to the native language. As a result of this association, non-native information into the target language is more likely to be accepted. (De Angelis, 2007, 29)

Williams and Hammarberg make a similar argument regarding foreignness before De Angelis. When learning Swedish as an additional language, the English L1 speaker in this study, who was also the initial author, leaned more heavily on her German L2 than on her English L1. Given the same requirement, the authors wondered why the German L2 would take precedence over the English L1. They contended that the speakers' actions were the consequence of a premeditated strategy. The learner (Williams) stated that she did not want to sound like a native English speaker, thus she avoided bringing L1 features into the Swedish target language. She also stated that she relied on a foreign language because it sounded more strange to her and so was closer to the Swedish target language. This argument varies from De Angelis's claim that association of foreignness is a cognitive constraint rather than an intentional strategy that a learner can control. (De Angelis, 2007, 29-30)

While these studies suggest that some crosslinguistic influence can occur from languages that are typologically more distant from the target language, a closer examination reveals that learners tend to draw on those elements of the source language that are phonetically similar, and thus formally similar, to those in the target language. This is not an absolute rule, but rather a distinct tendency, which implies that the learner must be somewhat familiar with the target form in order to transfer. (De Angelis, 2007, 31) To cite a few examples, Schmidt and Frota (1986, 255) assert that in a debate on the pronunciation of the

number setenta (seventy) in Portuguese, the student was wrongly pronouncing this word as 'sittenta' due to the effect of the Arabic term 'sitta', which signifies six in English.

CLI from distant languages appears to occur whenever a phonetic similarity requirement is met. Frequently, the things involved are also from the same language class, and the speaker is familiar with the intended form or expression.

Another element that has been proposed as a cause of CLI from distant languages is source language proficiency. Schmidt and Frota observed in 1986 that Arabic has an impact on Portuguese word order and the frequency with which indefinite articles are used. It should be noted that the subject in question was a fluent non-native Arabic speaker. Schmidt and Frota argued that for CLI to occur at the sentence structure level, the speaker must be fluent in the source language. (De Angelis, 2007, 32)

5.3   Summary

In this chapter I described a new concept, namely CLI (crosslinguistic influence), which attempts to explain how and under what circumstances prior linguistic knowledge influences the production, comprehension, and development of a target language.

In Chapter 5.2, I discussed languages that are considered to be close to the target language, or closer to it in comparison to other languages, are often preferred as sources of information, and they also appear to have a general facilitative influence on learning processes, as we have seen. In contrast, formal similarity, and particularly phonetic similarity, appears to play a significant role in triggering specific occurrences of CLI from both close and distant language. (De Angelis, 2007, 32)

6 CROSSLINGUISTIC TRANSFER BETWEEN ONE NON-NATIVE LANGUAGE TO ANOTHER

This chapter focuses on the types of linguistic information that can be transferred from one or more non-native languages to another, with particular emphasis on lexis, phonetics and phonology, morphology, and syntax.

6.1 Lexis

Non-native linguistic influence is most visible in lexis, where traces of non-target information are mostly overt and thus easily recognisable.

De Angelis mentions Möhle who provided some interesting examples. The author described the work of German L1 speakers who invented new terms in the target language using one of their non-native languages (French and Spanish). These students lacked advanced French knowledge and, as expected, mostly produced false friends or borrowings. Some of the words they invented include: remarcar (French: remarque, English: to make a remark) or groso (French: gros, English: big). (DeAngelis, 2007, 43)

Researchers discovered that content words (nouns, verbs, numerals, adjectives, and most adverbs) and function words (prepositions, determiners, conjunctions, and pronouns) from the L1 and non-native languages are not used equally during the production process. (Poulisse, 1997, 201-224) The concern from a multilingual standpoint is not only how content and function words are processed in the mind, but also how they are processed in different languages. The use of L1 content or function words in L2 speech production research is generally viewed as a form of borrowing, with the assumption being that the second language system is not as developed and automated as the native language system.

Poulisse and Bongaerts investigated the rate of usage of L1 content and function words in oral speech in a research with 45 Dutch learners of English as a second language. They looked at 771 unintentional language flips, categorizing them as non-adapted or morphologically or phonologically adapted. The difference between these two sorts of switches was determined by "hesitation phenomena and intonation." (Poulisse and Bongaerts 1994, 43)

Poulisse and Bongaerts also defined unintentional language changes as items pronounced without hesitancy or with a strong tone. The study discovered that Dutch English learners in grades 11 and 9 utilized more L1 function words than L1 content words in their L2 speech.

Poulisse and Bongaerts proposed that in L2 production, L1 function words are more likely to be used than content words because function terms occur more frequently in speech and are thus more quickly available. The authors' reasoning is based on the word-frequency effect, a well-known phenomenon in the psycholinguistic literature. According to the word-frequency effect, it is easier to access a commonly used term, such as 'table', than a less often used word, such as 'tank'. Learners pay more attention to the most important aspects of speech, therefore content words are more likely to be correctly selected in L2 speech. (De Angelis, 2007, 45)

When there are more than two languages, it appears that function words are no longer derived from the L1, but rather from one of the speakers' non-native languages. Vildomec (1963, 212) first claimed that multilinguals utilize words from their non-native languages even when the source and target items sound different.

Clyne observed that formal resemblance between two languages might have a reinforcement effect, resulting in lexical substitution in production. As a result, he claimed that "if two languages share a feature, informants tend to extend it to the third." (Clyne, 1997, 110-111) He uses the example of an Italian/Spanish/English trilingual who said in Italian: "ecco diceva che no che c/'affettava un po' alla scuola il bambino allora piu' per questo" (English: here (the teacher) said that it affected him a little at school - all the more for that reason). According to Clyne, the word 'affettava' is a result of the influence of the Spanish 'afectar' and the English 'affect'. In this situation, similarity is assumed to lead to the maintenance of interlanguage-based lexicon in speech. Another example of combining languages is interaction of French and Spanish, mentioned in Möhle (1989). She discovered a few terms that appeared to be the consequence of many influences. For example, in Spanish, the verb emplear is used instead of llenar (to fill), which is thought to be a result of the combined effect of French remplir, Latin plenus, and, of course, Spanish emplear, which means to employ rather than to fill. (De Angelis, 2007, 50)

6.2 Phonetics and Phonology

When speaking in the target language, foreign language speakers typically retain some phonetic features of their native language. This imparts a distinct accent to someone's speech, which can often reveal the person's origins and language background. Non-native languages are not typically thought to be significant sources of influence on the target language, but some forms of influence are possible. (De Angelis, 2007, 50)

Hammarberg and Hammarberg (1993, 63) provide a detailed account of non-native phonetic influence on Swedish as a third language acquisition. Their subject, an English L1 speaker with excellent German L2 knowledge, was asked to complete a story narration task in the Swedish target language. On two separate occasions, two samples of the subject's Swedish speech were tape-recorded and played back to Swedish native speakers.

The first recording was made shortly after the subject moved to Sweden, and the second was made about a year later. The Swedish native speakers were not informed that they would be hearing the same person speak; instead, they were instructed to listen to the recordings and identify the speakers' native language. In terms of non-native phonetic influence, the results were quite clear. The speaker in the first recording was judged to be a native German speaker, despite the fact that German was the subject's second language, whereas the speaker in the second recording was mostly judged to be a native English speaker, which was correct. Table 1.1. shows some of the sound segments from the English L1 (E) and the German L2 (G) observed in the first and second recording (Hammarberg and Hammarberg, 1993, 63):

Table 1.1. First recording:

G	German labial (u:])	huset
G/E	Very lax short /i/	vill, till
G	Less retracted long /a: /	ha, ja
G	Voiced intervocalic /s/ ([z])	huset, läser
G	Postvocalic /r/; uvular approximant or vocalized	är, tar, går
G	Syllabic nasal	hunden, tidningen

Table 1.2. Second recording:

G/E	Very lax short /i/	finns, till
E	Occasional reduction of unstressed vowel to shwa	kastar
E	Retracted, alveolar /t,d/	till, lite, sista
E	Slightly velarized /l/	till, bilden
Non-G	No longer [z] for /s/	läsa, huset
E	Postvocalic /r/	här, ser, sitter

Several observations are made by Hammarberg and Hammarberg as to why an English L1 speaker would rely so heavily on the phonetic settings of the German second language while producing speech in the Swedish target language. While they argue that the German L2 appears to have a greater influence in the early stages of acquisition, they also note that reliance on either the English L1 or the German L2 appears to be triggered by different needs. They believe that reliance on the L1 "is a key constraint in language learning and tends to be persistent, whereas reliance on L2 is a coping strategy that the learner uses initially when the phonetic form of L3 is too unfamiliar to master, and abandons as proficiency in L3 increases." (Hammarberg and Hammarberg, 1993, 65)

The authors also claim that in some cases, the German articulatory settings were extremely beneficial to the learner because they allowed her to avoid undesirable L1 phonetic features such as diphthongal vowel qualities in her speech. The speaker explicitly stated that she deliberately suppressed the English L1 phonetic settings in favour of the German ones because she did not want to sound like an English native speaker when speaking Swedish.

De Angelis also mentions River's diary of a sixth-language learner, which contains some evidence of non-native phonetic influence. The informant is an English L1 learner of Spanish as a non-native language, with a good understanding of French and very little understanding of German and Italian. Rivers discusses how to use French vowels and consonants, as well as stress patterns in French. For example, in French, /y/ is frequently used instead of /u/, and the final syllables of words are stressed, as in habló instead of háblo. Perhaps more surprising is the influence of Italian, a language the learner thought was mostly forgotten. The Italian influence appears to be limited to the pronunciation of phonetically similar words in the two languages, such as Italian cento for chiento or Italian buon giorno for buenos días. (Rivers, 1979, 70) Phonetic resemblance appears to facilitate transfer from native to non-native languages, as well as from distant to close languages. (De Angelis, 2007, 53)

Another example is a Turkish L1 speaker who was using /w/ for French /v/. Because Turkish lacks the phoneme /w/ but has the phoneme /v/, the authors argue that the informant must have overgeneralized the distinction between /w/ and /v/ in English, resulting in an indirect form of phonetic influence from English to the French L3. The assumption here is that when the informant first learned English, he used his knowledge of Turkish /v/ to learn the allophonic distinction between English /w/ and /v/, which he then extended to French. (Singh and Carroll, 1979, 58)

6.3 Morphology

Weinreich reports only a few cases of morphological transfer, but reading his work reveals that he was not entirely dismissive of this type of transfer, even coming to believe that highly bound morphemes could be transferred. For instance, he writes: "Bilingual children have been replacing the Romansh feminine indefinite article in, an alternant of ina used before vowels, by ina-n (ina-n-ura 'an hour' for in'ura) on the model of Schwyzertütsch, where, just as in English, the article a has an extended alternant, an, before vowels (a p^{f}luag 'a plough', an ap^{f}al 'an apple')". (Weinreich 1953, 32)

Odlin discusses the possibility of morphological transfer, but emphasizes that only a few cases were reported in the literature. He cites evidence from Fantini (1985), who demonstrated that pluralization rules from one language can be used in the production of another, as in the sentence "too many cars" produced by a bilingual Spanish-English child. Nouns and adjectives agree in number and gender in Spanish, but not in English. The pluralization of the English adjective many is interpreted as evidence of adjective pluralization transfer from Spanish to English. (De Angelis, 2007, 57)

Another example which De Angelis gives is morpho-semantic code-mixing between two non-native languages, Dutch and English, originally from Bouvy (2000). She discovered instances of Dutch pluralization rules and suffixes being applied to English words, such as help-t for helped, where -t is a Dutch suffix; product-en and gooderen for the word goods, where -en and -eren are Dutch inflectional suffixes. (De Angelis, 2007, 57)

The authors have given us some very convincing data on the transferability of bound-morphology.

6.4 Syntax

There has been little research on the acquisition of third or additional languages from a generative standpoint, but the few studies that have been published all point to a distinction between L2 and L3 acquisition. (De Angelis, 2007, 57)

De Angelis mentions Zobl, who investigated whether prior linguistic knowledge leads to the formation of more or less conservative grammars in multilinguals. In terms of verb-object adjacency, Zobl explains that a grammar that allows V NP and NP in contiguity is more conservative than a grammar that allows the introduction of elements such as adverbs and prepositions in the sequence, as in the following three sentences:

(1)   *A waitress brought the customer quickly a menu

(2)   *Did the teacher explain patiently the answer?

(3)   *The girl was sending to her boyfriend a letter.

In (1) and (2), the adverbs 'quickly' and 'patiently' are introduced, while in (3) the Prepositional Phrase (PP) 'to her boyfriend' is introduced. (Zobl, 1992, 183)

Another types of structures were then evaluated with adult L2 English learners from various L1s (Spanish and Japanese). These two native languages were chosen for their structural contrast. Spanish, like English, is a right-branching language, but Japanese is a left-branching language. The free relative phrase structure arises before the lexically headed structures in the production of Japanese L1 speakers but not in the production of Spanish L1 speakers, according to findings from evoked imitation. The authors explain these findings by claiming that while Japanese L1 speakers and monolingual English children had no prior experience with head-initial, right-branching languages, they all had to set the correct parameter value for the English L1 or L2. They believe that the findings show that "both determining and experience with the consequences of the parametric value of this grammatical principle are required in acquisition in terms of the development of a language-specific grammar." (Flynn et al., 2004, 8)

The choice of languages is a major strength of these kinds of research strategies. Kazakh is a Turkish language with a left-branching structure similar to Japanese, whereas Russian is a Slavic language with a right-branching structure similar to English.

As a result, if learners draw on prior knowledge of relative clause structures in the English L3, evidence of use of a right-branching language would imply the influence of the Russian L2, providing support for a Cumulative-Enhancement Model of Acquisition. The results of the second study revealed similar learning patterns for Kazakh L1 speakers and Spanish L1 speakers, indicating that "previous CP development can influence development of CP structure in subsequent language acquisition," according to the authors. (Flynn, et al., 2004, 13)

The results acquired from children, on the other hand, revealed something unexpected: their behaviour appeared to be more in line with the results found from English L1 children and Japanese L1 speakers. In their search for an answer, the authors examined the timing of acquisition more closely, noting that some of the children were studying Kazakh and Russian as L1s at the same time. They hypothesized a probable difference connected with when the L2 is acquired, that is, whether the acquisition of the L1 and the L2 is simultaneous or near-simultaneous, or if it is sequential. As a result, they suggested

that "while the L2 is still in progress, its influence on L3 acquisition is not the same as when the L2 and L3 are sequential." (Flynn et al., 2004, 14).

Flynn et al. make a significant contribution to the area by demonstrating that previously built grammars are used during the acquisition process. Languages can indeed have a major impact on target language development, even when competency in the second language is modest or intermediate. Furthermore, the authors discuss the distinction between simultaneous and sequential acquisition. Given their findings, the observation appears to be very promising for future growth and merits more examination. (DeAngelis, 2007, 63)

6.5   Summary

In the last chapter of my bachelor thesis I described types of linguistic information that can be transferred from one or more non-native languages to another. Namely lexis, phonetics and phonology, morphology and syntax. For all chapters I gave examples of crosslinguistic transfers and I summarized the essential points.

CONCLUSION

The main aim of the first chapter of this thesis was to introduce basic concepts such as mother tongue, second language, second language acquisition and under what conditions it occurs. As far as the influence of mother tongue is concerned, according to the materials I found, the influence can be both positive and negative. A learner's L1 is an important determinant of Second Language Acquisition. The mother tongue is a resource which learner use consciously and subconsciously to help them arrange the L2 data in the input and to perform as best as they can. (cf. Chapter 1)

In Chapter 2, I focused on the linguistics of SLA, namely Contrastive and Error Analysis, I described what Interlanguage, Morpheme Order Studies and Monitor Model are and I finished this chapter with explaining the concept of Universal Grammar. (cf. Chapter 2)

At the beginning of Chapter 3, I described the differences between the learners - the first specific difference was age, where I proved that the general interpretation that children learn a second language better than adults is a myth. Children have their advantages and adults have their advantages. Another difference I took into account was the gender of the learners. In some societies it is said that women tend to learn a new language faster or better, but there is no proper evidence for this, so I can consider it a social construct. However, some studies were done on gender differences and advantages, and it was proved that females appear to be better at memorizing complicated forms, whereas males appear to be better at computing compositional rules. Another benchmark for me was aptitude. For years, society believed that to learn a foreign language, you needed a certain kind of competence. This premise has been neither supported nor fully refuted. Some successful students possess strong linguistic-analytical skills, while others have strong memory skills. And the last measure I mentioned was motivation. According to some of the linguists mentioned, motivation can, in rare cases, be responsible for older students actually learning a new language and even sounding almost like a native speaker. (cf. Chapter 3)

In Chapter 4, I explained the concept of L3 (third language) and also discussed the memory of bilinguals and multilinguals. It was discovered that translating from the L1 into the L2 is substantially faster than translating from the L2 into the L1. The authors concluded that the links between the two languages do not appear to be equally strong, and that translating from the L1 into the L2 is conceptually mediated, but translating from the L2 into the L1 is lexically meditated. (cf. Chapter 4)

In Chapter 5, I addressed the question of what language we use as a source language when learning another language and I came to some interesting conclusions: in some cases, languages that person has not use for a long period of time could override native language and become the dominant source of information. These cases can be explained by proposing the existence of two interacting limitations that work together to block native language influence in favour of non-native language influence - perception of correctness and association of foreignness. As a result, when we have multiple languages in mind, our mind prefers to use non-native words as a source language since foreign languages are often thought to be closer to each other than to the native language. (cf. Chapter 5)

In Chapter 6 I focused on the transfer of linguistic information from one or more non-native languages to another (e.g. from L2 to L3). I first focused on the lexis, where the signs of non-native information are most evident. The conclusion that the learner takes content or function words from one of the non-native languages rather than from the native language is confirmed in the theories or studies of the most linguists (e.g. De Angelis, Gass and Selinker). In Chapter 6.2, the conclusion is that when speaking in the target language, foreign language speakers typically retain some phonetic features of their native language. In Chapter 6.3, the authors gave us credible data on the transferability of bound-morphology in several examples (Dutch and English, Spanish and English, etc., cf. Chapter 6.3). In Chapter 6.4, Flynn et al. make a significant contribution to the area by demonstrating that previously built grammars are used during the acquisition process. Languages can indeed have a major impact on target language development, even when competency in the second language is modest or intermediate. (cf. Chapter 6)

In the end, we can say that in the acquisition of a second language we can talk about the influence of the mother tongue (since it is the only language we know) and this influence can be of two types: positive and negative.

In the acquisition of a third, or even fourth or fifth language, opinions about the influence of the mother tongue are ambiguous. In cases where the L3 is closer to the L2, we may not be guided by the mother tongue at all, but by the L2. The only point where linguists agree that we are influenced by our mother tongue is in Syntax and Phonetics and Phonology, because we remember grammatical patterns and also retain a specific accent from our native language.

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LIST OF ABBREVIATIONS

CLI   Crosslinguistic Influence

CPH   Critical Period Theory

IL   Interlanguage

IP   Information Processing

L1   First language

L2   Second language

L3   Third language

SLA   Second language acquisition

TL   Target language

UG   Universal Grammar

LIST OF TABLES