

## **Translation as a human skill**

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# **Translation as a human skill**

From predisposition to expertise



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ABSTRACT: Whyatt Bogusława, *Translation as a human skill. From predisposition to expertise*. [Tłumaczenie jako umiejętność człowieka. Od predyspozycji do poziomu eksperta]. Adam Mickiewicz University Press. Poznań 2012. Pp. 445. ISBN 978-83-232-2504-1. ISSN 0554-8144. Text in English with a summary in Polish.

The book explores translation as a human skill in its evolutionary perspective from the predisposition to translate to translation expertise. By assuming that the human mind is intrinsically a translating mind all people who know two languages are able to translate but only some develop their natural ability into a more refined skill, fewer choose to acquire translation competence, and few attain the level of expertise. Starting with a thorough analysis of the bilingual foundations on which translation as a human skill is built the natural ability is analyzed and followed by an up-to-date account of translation as a trained skill with the underlying translation competence. To account for the developmental nature of translation as a skill a suggestion is made that the acquisition of translation expertise can be seen as a process of learning to integrate knowledge for the purpose of translating. While natural translators integrate only their bilingual knowledge professional translators build a Knowledge Integration Network (KIN) in which all the knowledge relevant for a task at hand is integrated and ready for use. The theoretical assumptions are put to an empirical test with research tools including a battery of questionnaires and Translog, a computer software program which allows to analyze the translation process without compromising its ecological validity. The subjects include translators at various stages on the developmental continuum. It is hoped that the conclusions and implications will raise awareness of the developmental nature of translation as a human skill, and thus challenge the common misconceptions.

KEY WORDS: translation, ability, skill, competence, expertise, knowledge integration, developmental continuum

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# Contents

<b>Acknowledgements</b> .....	9
<b>Introduction</b> .....	11
<b>Chapter 1: Establishing common grounds</b> .....	17
1.1. Human translating mind .....	17
1.2. Translation as a widespread phenomenon .....	20
1.3. Translation proper – essential distinctions .....	22
1.4. Translation as a human skill – common misconceptions .....	24
1.5. Translation as a predisposition, ability, skill, competence and expertise .....	25
1.6. The translator .....	30
1.6.1. Need for a developmental perspective .....	31
1.6.2. The role of translators .....	34
1.7. The scope of systematic research in translation expertise development .....	37
1.7.1. Linguistics .....	37
1.7.2. Translation Studies .....	40
1.7.3. Psycholinguistics and cognitive psychology .....	43
1.8. Conclusions .....	47
<b>Chapter 2: Bilingual foundations of translation ability</b> .....	49
2.1. Bilingual foundations and Translation Studies .....	49
2.2. The nature of human language and the knowledge of two (or more) languages .....	52
2.3. A bilingual person .....	58
2.3.1. Natural bilinguals and translation ability .....	60
2.3.2. Bilingual competence of L2 learners as potential translators .....	63
2.4. The interaction of two languages in one mind – an L2 learner’s perspective .....	67
2.4.1. Cross-linguistic interference .....	68

2.4.2. Three perspectives on bilingual coexistence in a single mind .....	69
2.5. The notion of language control .....	74
2.6. Bilingual memory .....	82
2.6.1. The hierarchical structure of the bilingual lexicon .....	83
2.6.2. The revised hierarchical model (RHM) .....	87
2.6.3. Deficiencies and limitations of the RHM .....	88
2.6.4. Bilingual memory and translation .....	93
2.7. Cognitive effects of bilingualism .....	98
2.8. Conclusions .....	102
<b>Chapter 3: Translation as an untrained ability .....</b>	<b>107</b>
3.1. Dispute over bilingual knowledge and translation capacity ..	107
3.2. Translation as a natural ability of bilinguals .....	109
3.2.1. Studies in natural translation .....	110
3.2.2. Natural translators are translators .....	116
3.3. L2 learners as natural translators .....	119
3.3.1. Translation as the fifth skill of L2 learners .....	120
3.3.2. Studies in L2 translation .....	126
3.4. Developmental shift in translation as a bilingual ability of L2 learners – TAP studies .....	130
3.4.1. Intercultural competence .....	133
3.4.2. Metalinguistic awareness .....	139
3.4.3. Re-organization of the bilingual memory .....	144
3.5. Conclusions .....	148
<b>Chapter 4: Developing translation competence .....</b>	<b>153</b>
4.1. Translation competence .....	153
4.1.1. The additive perspective on TC .....	154
4.1.2. The componential perspective on TC .....	157
4.1.3. The holistic perspective on TC .....	163
4.2. Acquiring translation competence .....	167
4.2.1. Some suggestions on how TC can be acquired .....	167
4.2.2. The correlation between TC and translation experience .....	172
4.3. TC acquisition and the “pedagogical gap” .....	177
4.3.1. Focus on the translation process .....	177
4.3.2. Learner-centred approaches to translation training .....	181
4.4. Different routes to translation competence .....	185

4.5. The professional self and translation as a profession ..... 188  
 4.6. Conclusions ..... 195

**Chapter 5: Becoming a professional translator:  
 A proposal of a Knowledge Integration  
 Network in the development of translation  
 as a professional skill** ..... 199

5.1. Creativity in translation ..... 200  
 5.2. Theoretical foundations of KIN ..... 204  
     5.2.1. The human mind as a synchronized system ..... 208  
     5.2.2. Limited capacity of the human mind ..... 210  
     5.2.3. Meta-cognitive supervision and goal orientedness ..... 213  
 5.3. Developmental nature of the ability to integrate  
 knowledge ..... 217  
     5.3.1. Approaching the SL text ..... 218  
     5.3.2. Approaching meaning ..... 222  
     5.3.3. Approaching external resources to aid translation ..... 223  
     5.3.4. Approaching the translation process: self-monitoring  
         and meta-cognitive supervision ..... 228  
     5.3.5. Approaching revision ..... 232  
 5.4. The translator as an expert learner ..... 237  
     5.4.1. The translator as a Systems Intelligent person ..... 238  
     5.4.2. The translator as a self-confident expert ..... 243  
 5.5. Undervalued affective factors in TC acquisition ..... 248  
 5.6. Conclusions ..... 251

**Chapter 6: Empirical investigation into knowledge integration  
 in translators – a questionnaire study** ..... 257

6.1. The purpose of the questionnaire study ..... 257  
 6.2. Discussion of the results ..... 261  
     6.2.1. Translation as a profession – assumptions and facts ... 262  
     6.2.2. Ideas about translation as an activity ..... 271  
     6.2.3. Bilingual foundations of translation  
         as a human skill ..... 276  
     6.2.4. A translating professional at work ..... 291  
     6.2.5. The translator as an individual ..... 308  
 6.3. Conclusions ..... 321

<b>Chapter 7: Empirical investigation into knowledge integration in the translation process – a Translog study</b> .....	327
7.1. Research method .....	327
7.2. Study 1 – objectives, participants, procedure .....	334
7.3. Study 1 – data analysis .....	337
7.3.1. Duration .....	338
7.3.2. Duration and dictionary use .....	342
7.3.3. Duration and typing speed .....	347
7.3.4. Distribution of the remaining time in the translation process .....	353
7.4. Study 2 – objectives, participants, procedure .....	369
7.5. Study 2 – data analysis .....	370
7.5.1. KIN as a single variable .....	371
7.5.2. Duration and other text production features .....	372
7.6. Conclusions .....	379
<b>Conclusions and Implications</b> .....	383
<b>References</b> .....	391
<b>Appendix I</b> .....	425
<b>Appendix II</b> .....	429
<b>Appendix III</b> .....	439
<b>Przekład jako umiejętność człowieka. Od predyspozycji do poziomu eksperta (Streszczenie)</b> .....	445



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## **Introduction**

Translation as a human skill is a broad complex issue. It can be studied from various perspectives and every different approach can contribute relevant points. Taking into account the multitude of languages in the world and the fact that there are currently more people who speak at least two languages, the number of potential translators must be impressive. Yet, translation is still a socially misunderstood phenomenon. On the one hand, the ability to translate from one language into another is socially expected of anybody who can communicate in the two languages in question. On the other hand, there are many voices which point out that there are many publically available translations of poor quality and instead of helping in cross-cultural communication, they confuse those who need them to interact with others whose language they do not share. Examples of such ambiguous and odd translations are encountered across the world from restaurant menu translations to travel information available on the Internet. There are translations of books which are a pleasure to read and one rarely stops to think that what is an enjoyable read is in fact a translation but there are also books which have been so oddly translated that one finds it difficult to follow the line of reasoning and might be tempted to blame the author rather than the translator who made a mess of the author's ideas by rendering them in a third rather than second language. Obviously there must be a broad range of skills involved in producing a translation and the unfortunate outcomes point to a lack of certain abilities, competencies and expertise.

This book is a modest attempt to show the human ability to translate in its developmental continuum from the predisposition to mediate meaning across different systems of communication including human languages to what is considered translation expertise. Taking this developmental perspective allows one to encompass a wide range of relevant factors which affect the human ability to perform language translation. There are still many unclear points on the developmental route a person who chooses a

career in translation has to cover. The observations made in this book allowed me to hypothesize that one of the essential aspects of translation expertise development is the human ability to integrate knowledge which is needed to perform a translation task at hand. This ability still exceeds the capacity of machine translators. Making an effort to grasp how translators activate and integrate knowledge into what I termed a Knowledge Integration Network (KIN) is hoped to enhance our understanding of the human translator before an attempt is made to apply it to machine translation. Before the futuristic dreams of computer translation are made true the need to educate professional translators is constantly growing and calling for more efficient translator training methodology.

The book consists of seven chapters and is divided into a theoretical and empirical part. Chapter 1 aims to establish common grounds for a comprehensive view of translation as a human skill presented in this analysis. It starts with a suggestion that we, as humans, are in fact all translators if we consider the nature of human language which encodes our ideas and intentions and allows us to communicate with others and deposit in language vital information for future generations. Yet, we rarely think about language use as translation unless we experience problems and suffer misunderstandings. This perception of a language user as a translator might lie at the heart of the human predisposition to translate across language barriers. It is this unique predisposition to transfer information encoded in one language into another language which opens the developmental continuum of translation as a human skill. Many forms and facets of translation are an outcome of this predisposition which gives people a natural ability to translate. For many intercultural encounters this natural ability is sufficient to ensure social interaction in multilingual communities. Translation is indeed a broad social phenomenon, bilingual children translate on an everyday basis, L2 users translate, L2 learners translate and of course practicing translators have their hands full to keep communication going on a global and local market. The point which I make in chapter 1 is that although they are all translators they occupy different stages on the developmental continuum of the human ability to translate. Some attention is paid to the services provided to humanity by practicing translators and the lack of thorough research into translation expertise development is pointed out.

Chapter 2 discusses the bilingual foundations of the human ability to translate. By providing a detailed look at what it means to know two languages the background for the development of translation competence is analyzed. The body of knowledge frequently taken for granted by Translation Studies in tacit assumptions that all those who aspire to become professional translators have mastered the two languages is shown as a complex dynamic system of knowledge both declarative and procedural. A point is made that bilingual knowledge is differently internalised by natural bilinguals and L2 learners with different consequences for their L2 and L1 performance as well as for their translation performance. Some light is shed on the issues relevant to translation as an activity which include bilingual memory, cross-linguistic influence and the need for language control in the bilingual mind in which both languages interact with one another and compete for dominance. Translation as a conscious operation requires taking this dynamic interaction under sufficient control to keep the two languages safely apart in translation performance.

Chapter 3 looks at translation as a natural ability of all bilinguals (i.e., everybody who can use two languages for communication). Two groups, natural translators in multilingual communities and L2 learners are analyzed in detail with references providing an insight into research into translation as an untrained ability, i.e., translation performed by those bilingual language users who have not received any structured training. Scant research on natural translation shows that this stage on the developmental continuum of translation as a human skill is worthy of further investigation. The magnitude of the phenomenon of what has become referred to as language brokering provides a valuable insight into the additional capacities needed for efficient translation apart from the bilingual foundations. They seem to include metalinguistic abilities which as pointed out by Malakoff and Hakuta (1991) might initially play a more important role than translation strategies. A closer look at L2 learners acting as translators provides yet another perspective on the untrained ability to translate pointing to the importance of one's language acquisition history in the development of translation as a human skill. A point is made that L2 translation is of interest not only to the study of translation but also to SLA research and methodology. A discussion of the benefits L2 learners/users can draw from the structured exposure to translation tasks including intercultural competence and metalinguistic awareness point to

some transformations which have to take place for further progression on the developmental continuum of translation as a human skill to reach the level of translation competence and expertise.

Chapter 4 takes up the difficult issue of translation competence which has to be acquired if one is interested in developing the human ability to translate to the level of translation expertise. Three of the most representative approaches to translation competence are presented and lack of a unanimously accepted definition of translation competence is noted. Relying on a shared agreement among Translation Studies scholars that translation competence underlying translation as a trained skill is experience-derived knowledge, both declarative and procedural, an attempt is made to relate the experience of translating to Translation Competence acquisition. The consequences of the lack of clear understanding of how Translation Competence is acquired bring the issue of a 'pedagogical gap' in institutionalized translator training. The critical views of leading scholars are presented and new approaches to structuring the learning environment so as to optimize the process of learning translation as a trained skill are reviewed. Finally, different routes to translation expertise are acknowledged and a glimpse at translation as a profession with its market requirements is presented. The development of the translator's professional self is likely to involve a further reorganization and restructuring of the existing knowledge structures but also an acquisition of a new professional identity, which arises from the awareness of translation as a socially required service. How the reorganization and restructuring of knowledge takes place and how it helps a developing translator in the actual performance still remains unclear.

Chapter 5 includes my own attempt to understand what translators who have chosen a career in language translation learn from experience. Relying on the body of knowledge presented in the previous chapters a hypothesis is put forward that professional translators in their course of translation competence acquisition learn to build a Knowledge Integration Network (KIN) for every translation task they perform. Drawing insights from psycholinguistics, cognitive studies and expertise research the operating principles behind the proposal of KIN are explained. The developmental nature of the translator's ability to integrate all the knowledge (declarative and procedural) needed to translate a specific text is discussed in terms of the differences in approaching the task of translating reported for novice and experienced practicing translators. The differences exhibited between inex-

perienced and experienced translators from the stage of SL text reading to the stage of revising the first draft of a translation seem to support the developmental nature of the translator's ability to integrate knowledge for the purpose of translation. Finally, the ability to build a Knowledge Integration Network is seen from the perspective of a developing translator perceived as an expert learner who through practice coupled with self-reflection becomes a Systems Intelligent person and in the process of acquiring his/her translation competence develops professional self-confidence, a fundamental feature of translation expertise.

Chapter 6 opens the empirical part of the book. A questionnaire study conducted among translators occupying various points on the developmental continuum of translation skill development aimed at verifying the hypothesized concept of the Knowledge Integration Network. Altogether 200 subjects responded to a battery of questionnaires aimed at eliciting valid data reflecting their views on translation as a profession and translation as an activity. The 1BA (N80), 2BA (N40) and 2MA (N40) subjects were treated as non-professional informants occupying early stages in the evolution of translation as a human skill and because of studying English at university level (EFL) they were treated as potential practicing translators. The group of professionally active practicing translators (N40) constituted a valuable source of data on work procedures and the professional translator's cognitive and language-related profile. The data analysis was carried out to provide a descriptive support for the hypothesized ability to build a Knowledge Integration Network for a specific translation task as a fundamental part of developing professional expertise.

Chapter 7 constitutes the second part of empirical analysis which verifies the hypothesized ability to integrate knowledge looking at the actual translation process data. Using a key logging computer software program, Translog (Jakobsen and Schou 1999) data are collected from translators occupying different points on the developmental continuum. Study 1 investigates translations of the same text performed by 2BA EFL students (N8), Translation Trainees (N8) and practicing translators (N8). Study 2 describes an experiment in which 2BA subjects (N48) were divided into two groups which differed by one variable, that of an induced Knowledge Integration Network. The results are discussed to verify research hypotheses formulated to seek empirical validation of the Knowledge Integration Network.

Conclusions and possible implications both in terms of translation pedagogy and future research are summarized and followed by a bibliography listing all the depository of knowledge which is relevant to the study of translation as a human skill, and without which this book could not have been written.



## Chapter 1

*When we learn to speak, we are learning to translate*  
Paz (1971: 152)

### Establishing common grounds

The purpose of this chapter is to briefly discuss some essentially important terms and notions which will frequently be used throughout the entire book. Translation as a human skill and translation as an activity is frequently a socially misunderstood phenomenon. As the voluminous literature on translation shows, it can mean different things to different people depending on many factors (Snell-Hornby 2006). The need felt by the author to include this chapter does not in any way mean that other approaches are insignificant but it aims to establish with the readers a mutually shared perspective on the genesis and evolution of translation as a human skill.

#### 1.1. Human translating mind

If we take a working definition of translation as a communication of meaning involving a change of form in which it was originally expressed it becomes plausible that we are all, in fact translators. In everyday life we express our communicative intentions using various systems of signs. We employ our body and senses to encode and decode information. A small gesture, a wink of an eye, a stare, a smile or a blank face can frequently say much more than words. In public spaces signs are used to impart information to large numbers of people. Sub-cultures and various social groups invent their own codes of communication. Musicians, mathematicians, farmers, grocers or computer scientists use different and unique systems of communicating meaning within their own communities, and will readily explain or *translate* that meaning when communicating with others who do not share their code and their underlying knowledge. They will put what they mean in simple words, which are within the reach of comprehension for a layperson, establishing in this way a shared platform for mutual understanding and successful communication. Following the Cooperative Principle and the maxims of language use including the maxim of quality, quantity, manner and relevance (Grice 1975, Cameron

2002), communication and mutual understanding is possible unless the participants choose otherwise. Generally, however as human hearers we assume that people more or less adhere to Grice's maxims or some kind of discourse grammar (Paradis 2009) and we instinctively are cued to make sense, to grasp the meaning intended by the speaker. In this way we satisfy our social need for communicating with others even if we have to read between the lines and ignore incidental ambiguities (Pinker 2007).

Language indeed is a peculiar system with its wonderful flexibility which always remains a user sensitive device. The same message will be structured differently when addressed to our boss, our colleague, our close friend, our partner or a child. Indeed, the ability to structure the form in which people express what they mean, or explain what somebody else said to other people is so deeply ingrained that we are not aware that we are in fact constantly translating for others and even for ourselves. As Pellatt (2009: 345) reminds "Ottavio Paz said that 'when we learn to speak, we are learning to translate' (Paz 1971). Even a monolingual child learns by explaining and paraphrasing" (Pellatt 2009: 345).

If one follows the Representational Theory of Meaning which, according to Cattell (2006), underlies almost all current psychological research on thinking, the view that we are all translators gets further support. Fodor's theory (1975, 2008) that the language of thought which has its own combinatorial syntax and semantics just like any other natural language implies that the act of putting our thoughts, intentions and ideas into words entails in fact an act of translation which, however we remain unaware of most of the time, but not all the time. When we can see that our communicative intentions are misunderstood or misinterpreted by our listener, we immediately say, 'this is not what I wanted to say, 'you don't get the point', 'what I meant was', 'let me put it this way', etc. As Cattell (2006: 75) explains in the classical Theory of Mind,

"mental representations are expressed in a language of thought, which cannot be the same as any natural language, and which must be universal, in the sense that anyone, of whatever language background, must be able to *interpret* it (*unconsciously*)" [emphasis mine].

In other terms it is not words that make us speak but our communicative intentions which have to be verbalized as we get on with the business of living in which numerous things have to be done through language use. In Levelt's (1989) speech production model below

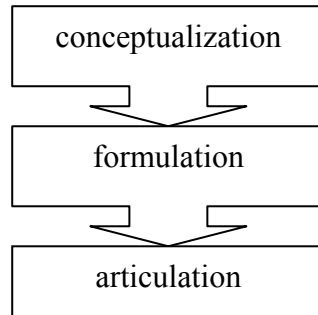


Fig. 1. Levelt's (1989) speech production model.

we deal with three levels: conceptualization (when we establish what we want to say), formulation (when we decide how we want to say it) and articulation when the what and the how is actually produced and becomes available to others who on hearing it will have to, with supersonic speed, reconstruct our route back to conceptualization so that they can see what we mean. Since we practice these operations all our lives, that is we plan, we execute and rehearse what and how we said something to self-assess the communicative effect (Donald 2006) it is possible that we have never thought of ourselves as translators.

Yet people differ in how they express themselves (Carroll 1993, Cameron 2001). Some are very good confident communicators who always seem to get what they want while others are often misunderstood or ignored and unable to successfully communicate their needs, requests, opinions and views. Although many people use language (or other systems of communication when verbal language is denied due to disability), we all differ in our ability to communicate and verbal communication is particularly vulnerable to misinterpretation. When the understanding is not reached and the meaning is not transparent but unclear or ambiguous we might be forced to work harder to retrace the cognitive route via which the message arrived, that is from its conceptualization via formulation to articulation (see Green 1993). Occasionally our personal mental effort might not be enough and we have to employ experts (i.e. lawyers, specialists) or refer to dictionaries (i.e. President Clinton during the Monika Lewinsky scandal when he attempted to define his 'relationship' with the aforementioned). As put by Nida (2002), the processes taking place in our

mind when we speak are so incredibly rapid that some people might even say something before they think and then have to bear the consequences of what they said or more precisely, of what they were understood to have said. All these problems with communication understood here as a *translation* of one's intentions into words or interpreting words of others as having a particular meaning occur on an everyday basis within one language. Needless to say the risk gets higher when in communication one has to surmount barriers of language and culture. More frequently than not, however, people manage to get their message across and verbal communication, providing that it is possible and granted by nature, is still the most widespread and economical means of exchanging information and sharing knowledge in human interaction. Indeed, the human desire to communicate must be extremely strong to be able to cross barriers created by a handicap, different modalities or foreign languages. To maximize our chances we employ a wealth of means including much more than language itself, gestures, facial expressions, prosodic features of tone in speech and other devices referring to form and structure in writing.

The role of language as a communicative device allowing for 'mind-sharing' within a given language community (Donald 1991, 2001) cannot be underestimated. As pointed out by Donald (2006) knowing a language allows us to plug in into the community's cognitive cultural network including a store of knowledge accumulated through history and recorded in language (written records, books, etc.). David Crystal's (1986) statement that language is the key which opens the door is a valid metaphor which expresses the role of language in providing access to knowledge recorded in the language. To share knowledge with another language community, to interact, do business and co-exist with speakers of other languages we have to learn foreign languages or hire translators. It is in this expanded international community that translation becomes more tangible and widespread as an aspect of everyday life.

## 1.2. Translation as a widespread phenomenon

Trying to encompass all the forms and facets of translation in language use Roman Jakobson (1959) in his essay *On translation* pointed to three kinds of translation which involve:

- a) intersemiotic translation or transmutation in which linguistic signs are interpreted by means of signs belonging to non-linguistic systems of communication (i.e. road signs, sign language, notation in music, and more recently computer language, etc.)
- b) intralingual translation or rewording (paraphrase) in which a message expressed in one language can be expressed in some other signs but belonging to the same language
- c) interlingual translation or translation proper

The three kinds of translation are what humans have at their everyday disposal and they make use of them with different, individually based degrees of success. However, as Derrida (1992: 225) observes the fact that Jakobson (1959) did not rephrase the term ‘interlingual translation’ by giving a ‘definitional interpretation’ like in the case of intralingual translation being interpreted as rewording and intersemiotic translation being defined as transmutation is symptomatic and implies a division between a literal and figurative sense of the term ‘translation’. To quote,

For the two forms of translation which would not be translations “proper”, Jakobson proposes a definitional equivalent and another word: intralingual translation or *rewording*. The third likewise: *intersemiotic* translation or *transmutation*. In these two cases, the translation of “translation” is a definitional interpretation. But in the case of translation “proper”, translation in the ordinary sense, interlinguistic and post-Babelian, Jakobson does not translate; he repeats the same word: “interlingual translation or translation proper”. He supposes that it is not necessary to translate; everyone understands what that means because everyone has experienced it (...). In relation to this word, when it is a question of translation “proper”, the other uses of the word “translation” would be in a position of intralingual and inadequate translation, like metaphors, in short, like twists or turns of translation in the proper sense. There would thus be a translation in the proper sense and a translation in the figurative sense (Derrida 1992: 225-226).

Following this observation we are all translators in the figurative sense in our individual way of using one or different systems of communication. We all experience problems with transferring meaning and master the skill of communication throughout our lives. Yet, one might argue with Derrida (1992) that the figurative literal distinction pointed out in the above quote is not always clear cut, because people sometimes have to translate what they said to ensure mutual understanding. It is not uncom-

mon to hear somebody say ‘Can you translate it to me as I do not understand what you have said?’ Although there has been very little research into language processing in which interlingual translation and paraphrase are cross-examined, scholars generally agree that the underlying processes share some similarities in both kinds of translation as well as demonstrate differences due to the different codes involved.

Having acknowledged the problems with expressing and interpreting meaning within one language in intralingual communication, being placed in a situation when to communicate one has to cross language barriers gives us a completely different perspective. If as it is assumed there are about 6,900 languages in the world (figure quoted in 1992 the year set by the United Nations as “The Year of Endangered Languages”) and we consider ourselves proud users of two languages, it is theoretically possible that in 6,898 cases we might have to use the services of interlingual translators. Generally, it is taken for granted that when communication can only take place through translation (proper, as Jakobson (1959) called interlingual translation), it then becomes the task, privilege and responsibility of those language users who have the knowledge of two languages and adequate skills to mediate meaning across language barriers.

### 1.3. Translation proper – essential distinctions

To start with the term ‘translation’ has multiple meanings in the English language. It refers to the product, i.e. a book which was translated, which is the outcome of the translator’s work. This sense of the word is possibly the most frequently used and common for people outside the translation profession or students of languages who are likely to view translation as an activity. For those who work as translators, the word ‘translation’ refers to both the product and the process which leads to a translation of the source language (SL) text which receives a new lease of life as its target language (TL) version. The act of translating has become to be understood as a complex process of problem solving and decision making with a dynamic interplay of cognitive, social and cultural factors (Snell-Hornby 1988, Tymoczko 2005, Kiraly 2005a, Tymoczko and Genzler 2007). The aim of translating is to overcome communication barriers created by languages (whether verbal or sign) and to make the meaning expressed in one language system available to those who do not have the knowledge of that particular system. Finally, the word translation refers also to the skills needed to perform the

act of translating. Translation is said to be the fifth skill of a bilingual person apart from the basic four skills of reading, listening, speaking and writing. In this sense it is usually used as a modifier in noun phrases like in ‘translation course’, ‘translation competence’ or ‘translation expertise’. Shreve (1997: 124) goes even further saying, “The widespread adoption of the notion of translation competence indicates that there is general acceptance in the discipline that translation is a form of knowledge”.

De Groot (1997) defines translation in the following way,

Translation and interpretation involve the rephrasing of a communication expressed in one language, the source language (SL), in another language, the target language (TL). The term *translation* is used both in a broad and in a more narrow sense. In the broad sense, it refers to all operations where an SL unit is turned into a TL unit, irrespective of the modality of input and output (writing, speech or sign language). The modalities of input and output may be the same or different. When the term is used in its narrow sense, it refers only to the activity of reformulating written SL text into written TL text (De Groot 1997: 25).

De Groot admits that the ambiguity in terminology can cause confusion, especially if one uses the term translation to cover both oral and written forms of translation. As De Groot (1997: 26) explains using “a single term to refer to both may veil the – fundamental – differences between them”. The differences, especially in terms of the processes involved, are in fact so substantial that the two may require a different set of skills to be performed optimally (Carroll 1978).

To avoid this kind of confusion and irrespective of the fact that both oral and written translation share some general features (i.e. the sheer communicative purpose, transfer of meaning into forms of a different language, crossing linguistic and cultural barriers, etc), the term ‘interpreting’ (i.e. consecutive interpreting, simultaneous or conference interpreting, or community interpreting) is used to refer to the specific processing demands of oral translation as compared with written translation. Some authors like, for example Gile (1995/2009) use the capitalized form ‘Translation’ to refer to both written translation and interpreting when there is no need to distinguish between the two modalities. Since this work is about translation as a human skill the term translation refers to those general shared features of Translation in its oral and written modality. When the need arises the distinction will be drawn between interpreting and written translation, the experimental part of the work, however is based on written translation.

#### 1.4. Translation as a human skill – common misconceptions

The plausible possibility that we are all translators might have contributed to some misconceptions about the human ability to translate between two languages. As put by Holmes (1988: 103), “the translator is in this simplistic common-sense view, a kind of cross-linguistic transcriber or copyist, a slightly glorified typist”. This kind of commonly shared expectation about the ease of translation comes from monolingual clients seeking translation services and from bilinguals themselves until they sit down with a text and try to perform the activity (Whyatt 2010).

For a lay person the skill of translating goes together with being bilingual, for professionals as well as for researchers interested in the relationship between bilingualism and translation skill, translating and especially simultaneous interpreting is perceived as “perhaps an uncharacteristically extreme version of bilingualism” (Paradis 2005: 411). These common misconceptions about the human skill to translate texts/utterances expressed in one language into another language most probably result from a simplified view of the translation process, which is, perceived by those without any experience in the task as a process of linear transcoding of a string of words in a source language (SL) text into a string of translation equivalents of these words in the target language (TL) text. Needless to say if this was the case computers would be easily able to replace the human translator and there would be no need to write this work. Yet, the common belief that when translating a person who knows two languages has to simply press a language switch button, or a lever somewhere in the mind and while scanning the SL text can instantaneously produce its translation, has led to unrealistic demands frequently directed to foreign language students or to professional translators. As observed by Nida (2002) it is not uncommon for people to commission translation work from students in foreign language departments and it is not uncommon for freelance translators to turn down a translation job which requires 100 pages of a financial report to be translated and ready on the chairman’s desk before 10 a.m. the following morning. The tangible results of these common expectations that translation as a human skill is automatically granted to all users of a second language (hence L2 users) are usually those translations which as pointed out by Korzeniowska and Kuhiwczak (1994) should never see the light of day. Yet, it is possible that a lot of misunderstanding and many misconceptions are, in fact, a result of termi-



nological confusion where terms like translation ability, translation skill, translation competence or translation expertise are used almost interchangeably as meaning the same. Distinguishing between them in this work is important.

### 1.5. Translation as a predisposition, ability, skill, competence and expertise

As observed by Carroll (1993: 3), “[a]lthough the term ability is in common usage both in everyday talk and in scientific discussions among psychologists, educators, and other specialists, its precise definition is seldom explicated or even considered. It is a word that seems to be accepted as a sort of conceptual primitive, and in fact it is intimately related to such commonly used words as *able* and the simple modal auxiliary *can*” (Carroll 1993: 3). What is more, as noted by Carroll dictionaries seem to be of little help in providing exact definition of the term and frequently are circular in the explanations they give. *The American Heritage Dictionary*, for example defines ability, “as a quality of being able to do something; physical, mental, financial, or legal power to perform” (...) but able is defined as “having sufficient ability”. Furthermore, some dictionary definitions of “able” though bring confusion especially when they give synonyms such as: skill, faculty, talent, capacity, cleverness, efficiency, aptness or competence<sup>1</sup>. In dictionaries of Psychology, especially the more modern ones, the term ability does not occur as an entry although it is frequently used in numerous contexts (Encyclopedic Dictionary of Psychology by Harré and Lamb 1983). In older dictionaries, the term is usually defined as “actual power to perform an act, physical or mental, whether or not attained by training and education” (English and English 1958). Carroll suggests that the most logically and semantically justified view of ability is that of “potential” (Carroll 1993: 4) open to individual variation.

It seems that the terminological confusion between ability, skill and competence is also present in the literature on translation, and although this problem will reoccur in further discussions, it is important to give it some attention before the major argument develops. Let us analyze the following quote:

Harris (1977) and Harris and Sherwood (1978) proposed the concept of natural translation, which is said to be an ability of bilinguals, that is, it is a derivative of bilingualism and appears as bilingualism develops.

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<sup>1</sup> <http://en.wiktionary.org/wiki/ability>

Lörscher (1995) characterizes their position as follows: “Harris and Sherwood emphasize that translation competence unfolds parallel to the development of bilingualism, and that the degree of translation competence increases automatically to the extent to which a child’s ability to use the two languages involved develops” (p. 113) (Shreve 1997: 121).

As can be observed in the above quote, it is taken for granted that the meaning of “ability” is synonymous with the meaning of “competence”. Looking further, translation competence is synonymous with translation as a skill, like for example in the title of the article by Neubert, “Competence in translation: a complex skill, how to study and how to teach it” (see Ivanova 1998: 92). Yet, in the same article Neubert defines competence as a combination of “complex knowledge and skill” (Neubert 1992: 412). Although the question of translation competence and the acquisition of expert knowledge will be dealt with in detail in chapter four, I would like to emphasize that equating ability with skill and competence may lead to false assumptions that ability (potential) guarantees competence. It seems much better to consider the three in terms of a developmental continuum which may take the following route: from predisposition to ability to skill to competence and finally to expertise in translation. A similar observation was made by Shreve (1997: 125) who suggested that translation ability should be viewed in “a kind of evolutionary space” where the starting point is indeed the natural ability of bilinguals to translate. The ultimate stage to which translation ability can evolve under favourable external circumstances (i.e. the need for translation services) and internal conditions (the translator’s conscious effort to develop) into expertise, still remains open to improvement through practice, or vulnerable to attrition due to lack of practice.

If then we accept the definition of translation ability as a potential, a ‘mere predisposition to translate’ (Toury 1995), translation skill can be defined as an actual demonstration of this potential. According to the MSN Encarta On-line Dictionary<sup>2</sup> skill can be defined as:

1. ability to do something well: the ability to do something well, usually gained through training or experience
2. something requiring training to do well: something that requires training and experience to do well, e.g. an art or trade

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<sup>2</sup> (<http://encarta.msn.com/dictionary>).

The term ‘competence’ is defined in the same dictionary as: “the ability to do something well, measured against a standard, especially ability acquired through experience or training”. The two examples which follow illustrate the meaning, “People began to question her competence as a teacher”, “I don’t doubt his scientific competence for a moment”. Consequently, ‘expertise’ is defined as “the skill, knowledge or opinion possessed by an expert”. Expert in turn is defined as “somebody skilled or knowledgeable: somebody with a great deal of knowledge about, or skill, training, or experience in, a particular field of activity”.

This suggests that it is justified to see translation skill as evolving from the human predisposition to mediate meaning serving as a basis for a natural ability to translate (i.e. in bilingual children) and spreading over a continuum of different developmental stages. Depending on how frequently the ability is exercised in translation performance and whether or not the experience of translating is, in a sense educational in terms of leading to improved performance, the ability to translate will develop into a more refined skill, which referring to point 1 above is then the ability not only to translate but to translate well. Let us accept for the time being that translating well as suggested by Shreve (1997: 125) means that the results of the translation performance are good with reference to results accepted as professional. The same developmental aim can be a product of formal translation training where the natural ability to translate is explicitly developed into a professional skill which is hoped to further develop into translation competence and later into translation expertise.

This ‘evolutionary space’ or a developmental continuum allows for a wide spectrum of performance referring to how well translation is done judged against professional standards from very poor, poor, adequate to good, very good, outstanding, excellent. What is important though is the premise that “[m]ovement within the space is not automatic or necessary and the end point is not a single cognitive set shared by all translators who arrive at professionalism” (Shreve 1997: 125). In other words, translation as a skill allowing for skilled performance is not something in its entirety given, or as it was, and still is, frequently assumed granted by nature to some privileged talented individuals (see Piotrowska 2007) but a complex skill which undergoes developmental evolution under favourable circumstances (Toury 1986). From this view of translation skill as a dynamic quality, the definition of translation competence as an underlying knowledge of how to perform when translating is also an evolutionary

quality with different levels of attainment. This view of translation competence as ‘a cognitive set of knowledge’, however is still not kept clear from other terms and is indeed used as synonymous with ability and skill. The quote below demonstrates this circularity of the three terms discussed, translation ability, skill and competence:

We assume that translation competence is not to be understood only as a repertoire, but rather as a role-specific competence. In this sense, competence includes not only the means (repertoire) but also the purported result, that is, competence is defined as the appropriate use of specific abilities according to surrounding demands (McClelland 1973), i.e., as a goal-oriented behaviour. In the domain of *Translation Competence* it includes and specifies the notion of competence as ability (Alves, et al. 2001: 47).

As indicated above, such terminological confusion allows for assumptions that there might be a relation of equality between competence and being able to translate, which everybody who knows two languages can do. Indeed, everybody who has access to two language systems can translate but the end result of the translation performance will differ depending whether the translator is relying only on the natural ability or using his/her consciously developed competence or expertise. This variability in translation performance (Séguinot 1997) visible in the quality of translated texts is frequently unknown to the general public which has a simplified view of translation skill. To quote Korzeniowska and Kuhluczak (1994: 11), “It seems that translation is the skill most commonly expected of somebody who speaks a foreign language. It is generally assumed that being able to communicate in a foreign language corresponds to the ability to translate from one language into another. In many respects, this conviction resembles the widespread opinion according to which every Chinese person is an excellent cook”. To safeguard this kind of misunderstanding, it is important to view the three frequently used terms as an evolutionary continuum:

PREDISPOSITION → ABILITY → SKILL → COMPETENCE → EXPERTISE

This evolutionary perspective makes it possible to accept that all people who know two languages are able to translate but their performance will differ depending on the stage they are at on the developmental continuum demonstrated above. Consequently, the generic term ‘translator’ has to be

also viewed as a developmental continuum which reflects the movement within the ‘evolutionary space’. The progression on the developmental continuum will have qualitative and quantitative consequences. First of all the further on the developmental continuum a translator is the richer and more refined set of abilities and skills he or she will have. In terms of quantity however there will be a filtering effect. From all people who have access to at least two languages and who by nature are predisposed to translate (just as they are predisposed to communicate), potentially all can use this ability and translate when the need arises. However, only some of those who translate will make the effort to refine their ability and will become capable of a skilled performance. Possibly some percentage of skilled translators will choose to pursue a career in translation and will develop translation competence either with or without the support of structured education. Finally, some of those who are competent practicing translators will develop to reach the level of translation expertise (Hoffmann 1997). In a way just like in any other complex skill there probably is a process of self-selection governed by a combination of individual factors (personal predispositions including affective factors such as a love for languages, cognitive abilities, personality features) and environmental impact (social need, personal circumstances) which decide that some, and frequently few individuals become experts in their chosen areas of expertise (Ericsson and Smith 1991). The pyramid-like figure 2 below illustrates the point.

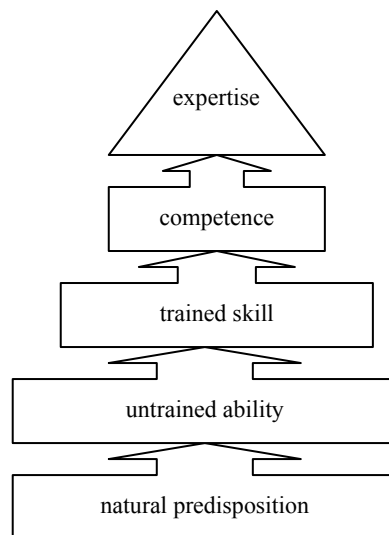


Fig. 2. Evolution of translation as a human skill.

It is still very much unclear how the progression takes place although some assumptions can be made relying on the research accumulated on the cognitive psychology of expertise in diverse domains (Hoffman 1992, 1997, Chi, Glaser and Farr 1988, Séguinot 1989b, Ericsson and Smith 1991, Feltovich, Ford and Hoffman 1997, Green and Gilhooley 1992). It can be expected that each stage is in itself a process of development or self-development of an individual who deliberately seeks the experience of translation. The progression from one stage to the next one is probably a slow process leading to a developmental shift rather than a quick jump. The one aspect which is seen as necessary for development that all scholars agree upon is the practice of translation since translation competence is commonly defined as experience-derived knowledge (PACTE 2003). Leaving this complex issue aside as it will be perused in the latter chapters of this book, let us first establish how the progression from translation predisposition to ability, skill, competence and expertise bears on the perception of the person involved, the translator.

#### 1.6. The translator

Following the rules of morphology a person who drives is a driver, a person who reads is a reader and a person who translates is a translator. Yet, the word translator like writer is not commonly associated with anybody who translates or writes and more frequently it is meant to refer to the name of a profession.

As observed by Malakoff and Hakuta (1991),

Translation is typically viewed as a valuable skill that is available only to the highly trained and linguistically sophisticated bilinguals who come out of interpreter and translator training schools. It is not a skill that is generally considered to be within the repertoire of just any bilingual, much less children, much less minority-language children. Yet, studies have found that children can both interpret and translate materials that are within their comprehension and vocabulary (Malakoff and Hakuta 1991: 144).

It seems then that translation as a human skill is a socially misunderstood phenomenon. On the one hand, the skill of translation is granted to a practicing translator, on the other hand it is expected of bilinguals (anybody who can use two languages for communication). Translation as a professional skill and the professional translator has been the focus of investiga-

tion for Translation Studies but the fact that translation ability as a potential to translate is open to all bilinguals (whether natural by birth or acquired by socio-cultural immersion or formal language teaching) has not been considered as an object of research able to contribute anything to our understanding of translation as a human skill (see Toury 1995, Krings 1986b, Harris 1992). The common fact that in multilingual communities translation performed by bilinguals who have not received any formal training (i.e. natural translators) is a part of everyday life and performs a communicative function thanks to which such communities co-exist has not earned a lot of scholarly interest. What is worse, the outcome of this untrained translation ability has been described as deviant from the standards set up for professional translators and left out as being unable to contribute anything to the course of evolution of translation as a human skill. In consequence there is a dearth of empirical research into translation expertise development (PACTE 2003) although there are voices that point out the need to investigate the development of the human ability to translate (Cronin 2005, Kiraly 1995, 2005a). Some scholars have made valuable suggestions as to how the development of the human ability to translate might develop (Kusmaul 1995, Gile 1995, Toury 1995, Shreve 1997) and their ideas have been widely accepted by the Translation Studies (hence TS) community, still empirical validation is not available and the literature is based on experience-based assumptions about the development of translation expertise (see Chesterman and Wagner 2004). Translation teaching pedagogy is anxious to receive a model it could safely adopt for the practical purposes of translator training (Kelly 2005, Cronin 2005, Tennet 2005). A model that would respect the continuity of the developmental process and encompass all forms and facets of translation as a social communicative phenomenon generated by all communicators who assume the role of the translator is very much desired.

#### 1.6.1. Need for a developmental perspective

Indeed, it seems only fair to admit that translation is a broad phenomenon. Bilingual children in multilingual communities frequently act as language brokers (for a review of literature see Morales and Hanson 2005) and community interpreters for their relatives and neighbours. They are asked to translate because they can do it, and they do it even if it requires taking on grown up roles as communicators. Foreign language students are often

asked to translate texts from and into their foreign language because they are socially expected to be able to do it and if they say they are not able to produce a translation they feel their knowledge of the foreign language is undermined. Translation as a human skill is socially expected of people who have access to two languages. In consequence, the term translator should be able to encompass a range of abilities. In other words, a translator is never a stable entity but he or she is always positioned at some point on the developmental continuum from being a novice to being a professional. Although, as observed by Shreve (1997) even the term professional translator is problematic, in his own words,

I'd like at this point to dispel the notion that professional translation is synonymous with either graduation from translation schools or the selling of translation services on the open market. In the literature, there is some significant confusion about what professional translation [and thus professional translator – added by me] means (Shreve 1997: 125).

As mentioned above Translation Studies have primarily focused on the professional translator but much more has been said about what the translator should be like than how one becomes a professional translator. Snell-Hornby (1992) in her article “The professional translator of tomorrow: language specialist or all-round expert” set up very high standards claiming that the translator should rather resemble “the intellectual polymath, and a polyglot as well”. To quote, “Our ultimate aim is to develop latent linguistic (and cultural) talent into the professional competence of an expert, who, as a specialist in the fields of language, culture and communication, can work as a generalist in a great many areas where translation is required” (Snell-Hornby 1992: 22). Carrying on Snell-Hornby says, “obviously our young graduates can at best be seen as potential experts of this kind, for all we know, in the professional life of a translator nothing is as vital as experience”. Indeed, the word “experience” has become, and still is the magic word, in the debate on what constitutes a professional translator. However, it has never been specified what the vital ingredients of experience are from which the professional translator emerges. As observed by Shreve (1997: 128) if the assumption is made that translators learn from their experience, the relevant questions are these: ‘What are they learning?’ and ‘How are they learning it?’ These questions formulated 12 years ago are still pending some plausible systematic empirically based answers. To keep telling the aspiring translators that ‘practice makes perfect’ is clearly not enough.



Walters (2005) shared some observations which show the clash between high expectations set for professional translators and the human aspects of the skill.

The interpreter's/translator's identity is presumed in some contexts and for some genres to be anonymous, objective, and even omniscient – no mean task for a mere mortal who has sometimes been compared to an airport control tower operator. In reality, the interpreter/translator is human, male or female, with a fixed age, professionally trained, and may have come to work with a host of personal and circumstantial qualities that have greater or lesser relevance to the task in hand (Walters 2005: 212).

It is precisely the human aspect of the translator indicated by Walters (2005) which possibly has been overlooked in the study of translation skill development. For much of the TS research the translator's identity, that is his or her psycholinguistic profile, is frequently unspecified and undefined which consequently might lead to misunderstandings in the interpretation of findings provided by various studies. Snell-Hornby (2006: 123) commented on the misleading claims of Krings' (1986) research who used the method of thinking aloud (TAP studies) trying to investigate what is going on in the translator's mind saying that Krings (1986) did not investigate professional translators but language students. One can conclude that L2 learners are then contrary to the common expectations unable to translate, and do not deserve to be called translators. Yet, one could ask, 'what should they be called when they in fact are fully able to produce a translation?' Like natural translators and language brokers L2 learners can act as translators who use their natural ability to translate.

Furthermore, a lot of research into language processing in translation is using both the terms 'translator' and 'translation' to any kind of interlingual task, such as single word translation or the simple transcoding of sentences, and text translation. This overextension of the term is of course morphologically motivated but just as it was the case with the use of the term 'bilingual'<sup>3</sup>, it can lead to a misinterpretation of research results. A lot of studies which report findings on the process of translation do not investigate professional translators or interpreters but use bilinguals sometimes with a very brief bilingual history of their second language ac-

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<sup>3</sup> Mostly expected to mean natural balanced bilinguals who as shown by Grosjean (1982) and others are rare or non-existent, but also used to refer to anybody who can speak two languages.

quisition. Obviously there must be vast differences between somebody performing a translation task who is only a fluent bilingual, a novice translator undergoing training, a qualified translator beginning his/her career and a professional translator with several years of experience (Hoffman 1997). Investigating how they all cope with the task can bring important insights into the evolution of translation as a human skill.

In view of the above considerations, however, about the developmental nature of translation as a human skill, and to be consistent with their implications for the person who is the agent, the translator, it is only fair to suggest that the individual performance of the person who translates will reflect the place on the developmental continuum of translation as a human skill. This developmental perspective makes room for all kinds of translators and for all kinds of translations produced. The translator-in-the-making is always somewhere on the developmental continuum from being able to make use of the natural ability to translate throughout the process of developing specific skills towards achieving translation competence and expertise. Yet, this developmental view is not explicitly admitted. It is of utmost importance in this work to emphasize that in this study the translator is viewed as a developmental entity. He or she has to cover a certain route of knowledge acquisition and building up his/her repertoire of skills to be able to produce translation up to professional standards. It is a developmental route that is never completely finished (see Shreve 1997, PACTE 2003) as when providing translation services one is constantly forced to learn not only new words but generally acquire knowledge. As it is known from cognitive studies acquiring new knowledge and learning new skills will always have a restructuring effect on the existing knowledge and skills (Anderson 1980, 1986, 2005, Donald 2007b).

Taking this broadminded view allows one to see the breath of translation as a human skill and might lead us closer to understanding its multi-layered complex developmental nature. After all it is difficult to imagine where we would now be in terms of humanity and civilization if it was not for the human ability to translate, to transmit knowledge and disseminate achievements and advances to all or at least many citizens of the world.

### 1.6.2. The role of translators

It is difficult to talk about the role translators have played throughout history (Delisle and Woodsworth 1995) without running the risk of being

pompous. Their presence confirms the powerful need to communicate which is ingrained in people and the results of their work are indispensable for a feeling of the continuity of our civilization and for transmitting knowledge. If it was not for translators we would not know the works of great philosophers from ancient Greece, for example, and the name of *Agora*, a place where the idea of democracy was born would be alien and meaningless to the modern world. It is beyond imagination to envisage how much impoverished we would have been not knowing the works of great classic writers, novels by Hugo, Dickens, Dostoyevsky, and we know them because they were translated and by that made available, accessible to users of other languages than the original language they were written in. It is translators who provide a vital link between cultures and nations divided by languages throughout history, although they themselves remain invisible otherwise than in the translations which they produce (Venuti 1995).

As put by Gentzler (1993: 1) translation as social practice is “as old as the tower of Babel”. If one is willing to take the biblical perspective, translation services became required with the fall of the Tower of Babel where the tongues were mixed to create confusion and since then humans became forever destined to translation and subjected to translation, “to the law of a translation both necessary and impossible” (Derrida 1992: 226). Derrida continues on the same page saying that after the fall of Babel, “Translation becomes law, duty, and debt, but the debt one can no longer discharge”. No matter if one is ready to accept that the fall of Babel at least symbolically marked the beginnings of the translator profession, it is not infrequently referred to by translation theorists. Steiner (1975), for example entitled his influential work on translation, “*After Babel*”. Needless to say the story of the Tower of Babel itself has become known worldwide through translation. In a way one might say that the history of human civilization is also a history of translation and much that we know about it we know through translation and this means we owe our thanks to translators.

In today’s world translators are in growing demand. They accompany politicians on their foreign visits, translate literary works as soon as they are written by acknowledged original writers, work in international business relations, translate official documents and news items as soon as they are released by news agencies throughout the world. It is through translation that new technological advances are shared and knowledge and expertise achieved in one country can be disseminated and used to improve

the life of people in others, no matter how geographically remote the places are. It might be trivial to say that while languages make us citizens of our own countries, translators make us citizens of the world, trivial but true.

Since translators are indeed social agents (i.e. gatekeepers see Chau 1999: 233) responsible for what is saved and consequently accessible to others, as well as for what remains for ever lost in translation and therefore inaccessible to others, a viable question to ask is what constitutes their expertise. What is the route that one has to cover from being able to use two languages to being able to translate between them with fluency and confidence? Can all the people who are bilingual (in the sense that they can use two languages in everyday life) become successful translators? What skills are needed to translate with confidence and produce competent fully functional translations? Unfortunately, there are no readymade scientifically approved answers to these questions and although translation has always been part and parcel of human life, and continues to be in acutely growing demand, translators themselves have always remained in the shadow of their work. We know the great classic books and films but we do not register who translated them. We simply deposit trust in translators as we do in any other specialists and professionals to whom we have to resort, that they did their job well. Most practicing translators are aware of that trust and indeed produce excellent translations, but there are also those who unlawfully call themselves professional translators since it is legally unregulated in some countries including Poland and the US where no official accreditation is needed to provide translation services. As a result many translations which appear in print are produced by natural translators who might not be themselves aware that they abuse the social trust of a client who seeks translation services and is usually not in a position to assess the quality of the translation which he or she receives. It is not uncommon to come across strange or funny translations, like for example on a menu in a Polish restaurant where according to a neatly presented translation one can order, 'trout suffocated in herbs' and to go with it, perhaps a glass of 'sparkling wine' (Whyatt 2003). Although the issue of translation quality is complex and multilayered (House 1977, 2009) there is a close connection between the stage at which a given translator is on the developmental continuum of his/her skills and the quality of work he/she is able to produce (Shreve 1997, Cronin 2005). Since the word 'translator' is extremely stretchable as it was pointed out in the section above, and since we are all interested

in translation products which are of high communicative standards, the demand to investigate the route from a novice to a professional seems well justified in view of the fact that so far it has unfortunately remained largely under investigated (PACTE 2003).

### 1.7. The scope of systematic research in translation expertise development

The reasons for the relative lack of research into translation expertise development are complex and require taking a historical interdisciplinary perspective when looking at those disciplines which have, or should have a viable interest in the study of translation in general. First and foremost, the discipline of Translation Studies is entirely devoted to the study of translation in its all possible aspects concerning both theory and practice. Since, however translation is a form of communication and in its verbal form is dealing with language it belongs to the area of applied linguistics, sociolinguistics, psycholinguistics and cognitive psychology. Let us briefly inquire to what extent the topic of translation as a human skill has been investigated in the three most relevant disciplines: linguistics, Translation Studies, psycholinguistics and cognitive psychology.

#### 1.7.1. Linguistics

Linguistics is a discipline with well established roots devoted to the study of language with a broad spectrum of interest including theoretical and applied linguistics. Historically, it also encompassed the study of translation but in the early 1980s it was considered to provide a too narrow research paradigm to study multiple aspects involved in translation (Berman 1989). Following the establishment of the new independent discipline named Translation Studies (Snell-Hornby 1988) the topic of translation in both theoretical and empirical studies carried out by linguists has rarely received attention. Although major debates echoed von Humboldt's conviction that there must be a midpoint shared by all languages (i.e. Chomsky 1965<sup>4</sup>), the focus was always on structures rather than on people who use them. Contrastive analysis (Lado 1957) studied how the postulate of Universal Grammar (UG) was differently realized in various languages.

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<sup>4</sup> Chomsky (1965: 202) however in an enigmatic way stated that "although languages are to a significant extent cast in the same mould, there is little reason to suspect that reasonable procedures of translation are in general possible".

The similarities and differences between languages were studied to predict a learner's difficulties (Arabski 1979, Fisiak 1991), but the human skill to translate was rarely used as a window on the two opposing paradigms: UG versus linguistic relativity (with few exceptions, i.e. Lewandowska-Tomaszczyk 1985). Linguistically confined reasoning when applied to translation allowed only for theoretical discussions of equivalence and untranslatability without reference to actual translation practice (Hatim and Basil 1990).

According to Berman (1989) theoretical linguists have no real interest in translation studies although linguistics continues in a way to insist that translation is a proper object of linguistic investigation as it is able to offer a conceptual analytical framework for the study of translation. However, "it defines translation in such an abstract way that it ignores almost entirely the written and textual aspects of the act, not to mention its cultural and historical dimensions" (Fawcett 1997: 144). Fawcett (1997) argues though that linguistic discourse although not able to circumscribe translation, "has a role to play and a voice which will not be silenced" (Fawcett 1997: 144).

Indeed, the relationship between linguistics and the study of translation has been a troubled one (Fawcett 1997). It is quite risky to guess how many linguists, whether theoretical or applied, would see benefits in the study of translation? Looking at linguistics and Translation Studies one is likely to notice that the reluctance is not one-sided but rather mutual. Snell-Hornby (2006) in her recent publication, *The Turns of Translation Studies* expressed her worries that some translation scholars might want to put an end to the troubled relationship between TS and Linguistics, saying that,

This impression and particularly the observation that the pendulum is swinging back to the past, was for me confirmed at the close of the Third EST Congress in 2001, when there was an informal general session to give participants the opportunity to comment on the contents and results of the conference. The younger generation in particular were invited to present their opinions. Most striking for anyone familiar with the course of the debate over the last thirty years was the tendency noticeable both in the topics of the conference programme and in the comments of that closing session, "Back to Linguistics" (cf. Snell-Hornby 2002). Is the translational wheel to be reinvented yet again? Despite the promise of "new tools and methods" (Chesterman 2002), it might seem so indeed (Snell-Hornby 2006: 151).

The above quote shows, on the one hand a genuine concern about continuing the study of translation with the turns (i.e. the cultural turn and the functional turn) the independent discipline of Translation Studies has taken since it freed itself from the exclusively linguistic paradigm. On the other hand however, it fails to see that the linguistics of today is no longer the “straitjacket of the time” when the approach to translation was product oriented and the translation process was considered as a purely linguistic operation in which the aim is achieving equivalence of meaning through a transformation of structures (Catford 1965, Nida 1964, Koller 1972). The impossibility to capture the essence of translation even only as a specific case of source-language-text-induced target-language text production (Neubert 1985: 18 quoted after Schäffner 1998: 83) led to the emergence of a new discipline to study the multi-faceted phenomenon called translation. Still, translation intrinsically involves the use of language or languages, both the use of language and translation are goal oriented and functional and serve a common aim of communicating with others. Many disciplines which originated in linguistics and other related disciplines, like for example psycholinguistic, cognitive linguistics, sociolinguistics, text linguistics or neurolinguistics are focused on vital aspects of communication through language and as such they have a lot to offer to the study of translation as a social phenomenon, as a cognitive-communicative activity and as a human skill. Translation Studies have borrowed various concepts from linguistics (see Lewandowska-Tomaszczyk 1985: 59) and from neighbouring disciplines throughout its short history<sup>5</sup> (for a detailed review see Malmkjaer 2005). As stated by Chriss (2006) translators are applied linguists, language professionals and as expressed by Hatim and Mason (1990) in their foreword to *Discourse and the translator* writing on translation is a contribution to “this important area of applied linguistics research”.

The cooperation and a possible synergy especially in the area of empirical research has recently been voiced by some translation scholars (De Groot and Christoffels 2005, Gile 1997, Shreve 1997, Walters 2005, Chmiel 2010) and the time is indeed ripe to bury the hatchet between TS and linguistics. The benefits are most likely to be mutual and might prove wrong the common conviction expressed by Uwajeh (1994) in the following way:

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<sup>5</sup> For example Reiss (1981) and her text typology after Bühler’s organon model of functions of language, Fillmore’s scenes-and-frames theory (Snell-Hornby 1988), Toury’s (1995) concept of ‘native translator’ possibly encouraged by Chomsky’s (1965) native speaker, to give only three examples.

“If the importance of linguistics for translation is obvious nowadays to linguists and non-linguists alike, it is generally not appreciated by linguists that linguistics itself could benefit from the findings of translatology” (Uwajeh, 1994: 287). If so far linguistics has not displayed much interest in the human ability to use languages in order to translate the next most viable discipline to take up genuine interest in translation skill/skills is TS itself.

### 1.7.2. Translation Studies

Translation Studies as a fully independent discipline (with currently a wide range of interest, see Baker and Saldanha 2009) started to establish itself in the 1980s following a seminal work of James Holmes (see the collection of his lectures edited by Broeck 1994). Following the departure from linguistics, translation scholars devoted considerable attention to these aspects of translation which had not, and could not be investigated within the constraints of linguistics (see Gentzler 1993, Snell-Hornby 1988, Toury 1995, Hatim and Mason 1990). These new areas of investigation included intercultural issues (Snell-Hornby 1988, Bassnett and Lefevere 1990), the question of norms (Hermans 1991, Toury 1995), functional approach with the *skopos* theory (Reiss and Vermeer 1984), which shifted attention from the SL (source language) text to the TL (target language) text steering far from the much hated concept of equivalence (see Snell-Hornby 2006: 152, Bassnett 1996). New schools of thought focusing on the function that translated texts play in the target culture, such as the “Manipulation School” or the school of Descriptive Translation Studies and Deconstructionism appeared, and new theories were formulated (see Holz Mänttari 1984).

With the map of the discipline of TS drafted out by Holmes (1988) the new research area “should emerge as an empirical science: main split into Pure vs. Applied branches” (Toury 1995: 9) implying in this way “a proper *division of labour* between various kinds of scholarly activity” (Toury 1995: 9) in the same manner it was done in linguistics. Toury (1995) in his influential book, *Descriptive Translation Studies and Beyond* insisted that the division between the pure and applied branches should be kept clear. In his own words,

I would hardly subscribe to the view that (epitomized by Peter Newmark but shared by so many) that “translation theory’s main concern is to determine appropriate translation methods” (Newmark 1981: 19); definitely not any more than “linguistics main concern is to determine



appropriate ways of language use". Strong as this conviction is, however, it does not preclude the possibility of drawing conclusions from theoretical reasoning, or scientific findings, to actual behaviour, be its orientation retrospective (such as translation criticism) or prospective (such as translator training or translation planning. This possibility does exist, of course. However, drawing conclusions is up to the *practitioners*, not the scholars (Toury 1995: 17).

This determined view of the theory vs. practice divide might seem dated at the present time where most TS scholars view the study of translation as a perfect ground to observe how theory and practice feed on each other and stimulate new ideas (Kussmaul 1995, Chesterman and Wagner 2004). Yet, Toury (1995) was ahead of his own time when he pointed out that none of the Applied Extensions of TS can "draw on Translation Studies alone" and pointed out that the area of translator training, for example apart from drawing on pure TS would be modified by a theory of teaching and learning.

This pioneering observation has for years at the worst remained unnoticed and at the best was taken up in the works like PhD dissertations that have never been published. As observed by Cronin (2005),

Translation theoreticians had in previous decades tended to neglect translation pedagogy for considerations of translation, text, history, abstracted from the teaching process. Presentations on pedagogy at translation conferences were devoted either to a scornful repudiation of theory in the name of experience or to thought deadening outlines of course syllabi which told little if anything about how courses were delivered or what their deeper theoretical underpinnings were (Cronin 2005: 250).

Toury's (1995: 19) remark on the "inherent heterogeneity" of the applied TS granted by the fact that each of the branches is an "extension 'into the world' of the discipline" implies the need for an interdisciplinary approach to translator training. His further comment, however in which he claims that applied TS "cannot be anything but prescriptive" is now questionable<sup>6</sup>.

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<sup>6</sup> At the time, however many of the 'new' theories took over old ideas (Ljudskanov 1969; Seleskovitch 1976, 1978) which offered purely theoretical constructs with stages taken for granted based on envisaging "what a translator might do" (Fawcett 1997: 139) or what he/she should do when working on a translation (i.e. Toury's concept of a 'native translator').

Toury when advocating the prescriptive nature of applied extensions said,

They are not intended to account either for possibilities or likelihoods or for facts of actual behaviour, but rather to set norms in a more or less conscious way. In brief, to tell others what they should have done and/or should be doing, if they accept these norms (or, very often, the authority of their proponents) and submit to them (Toury's 1995: 19).

The prescriptive attitude in a way has for years persisted in TS (see Walters 2005 for the criticism of the prescriptive bias in TS) and it has overshadowed the pioneering call for the interdisciplinary approach. If it had been noticed and if a truly interdisciplinary effort had been made to investigate the development of translation expertise, the prescriptive attitude might have given way to more empirically based research (see PACTE 2003). This was after all what Holmes appealed for when he said, "It seems to me that before we can know how to train translators, we have to know what takes place in the translation process" (1988: 95-96). Although the effort to unravel all the intricacies of the translation process continues and remains an open area of investigation Holmes' conviction holds valid.

On the other hand, and frequently in the eyes of representatives of other disciplines (i.e. Walters 2005) from the very beginning Translation Studies had a strong practical bias and concentrated on the practicalities of professional translation with implications for translator training programmes. This practical bias, according to Walters, for example, "may have blocked or delayed the investigation of more theoretically and empirically challenging questions" (Walters 2005: 209). TS as a discipline was interested not in any kind of translation but in professional translation, although there still is little agreement on what in fact constitutes professional translation (see Shreve 1997). In consequence, Translation Studies were not interested in the early stages of translation expertise development or in its origins as a human skill (see chapter 3 on natural translators). The developmental nature of translation as a skill, and its consequences for translation as a product have not been adequately researched to dispel the common misconceptions about the human ability to translate discussed earlier in this chapter. Cronin (2005) noted that from the 1940s onwards many translation schools were established but contrary to expectations courses for translators have not resulted in distinctive approaches to teaching translation. It took fifty years as Cronin continues, "it was not until the 1990s, at the end of the twentieth century, that serious monographs began to appear which looked

at the teaching of translation not only as a practical but as a *theoretical* problem” (Cronin 2005: 250). There still is a lot of misunderstanding about what are the essential ingredients of translation expertise, and the old dilemmas whether it is indeed an art or a craft, a matter of talent and natural gift or hard work, practice and perseverance are still debated (Tabakowska 2003, Pieńkos 2003, Piotrowska 2007). It seems justifiable to suggest that to gain grounds for challenging these dilemmas one should try to retrace the course of the development of translation as a human skill from predisposition to expertise. Recent projects (e.g., the PACTE and the TransComp project) conducted by TS scholars committed to investigating how translation competence develops in trainees who aspire to become professional translators will hopefully advance our understanding of the developmental nature of translation skill. Let us look at psycholinguistics and cognitive psychology to see whether these disciplines have displayed interest in an all-inclusive approach to translation skill.

### 1.7.3. Psycholinguistics and cognitive psychology

In her 1997 article entitled, “The cognitive study of translation and interpretation” De Groot (1997: 26) noted that translation has not been considered as a subject worthy of investigation in the field of applied linguistics, psycholinguistics and cognitive psychology. Several reasons were pointed out for this neglect including, for example the fact that translation was not emphasized in mainstream journals and that it was too quickly labelled as a ‘special skill’ reserved for highly trained professionals (see also Malakoff and Hakuta 1991) and therefore judged by many “too complex to grapple with” (De Groot 1997: 26). Nearly a decade later the niche has not been filled by psycholinguistic studies of translation in general apart from some isolated case studies in the form of PhD dissertations (Hejwowski 1992, Whyatt 2000) which remained unpublished and thus generally not available to a wider research community. In consequence, in 2005 Walters admitted that, “There have been surprisingly few systematic and scientific studies of interpretation and translation (Shlesinger 2000), particularly in the fields of applied linguistics and psycholinguistics” (2005: 209). Further reasons for the absence of the interest in the study of translation as an instance of bilingual language performance according to Walters are to be found in “the sheer complexity of the phenomenon involving hidden social agendas, non-explicit pragmatic considerations, unbridgeable cross-linguistic gaps and

awesome memory and time demands” (Walters 2005: 209). In 2006 in an article, “Language control in bilinguals: monolingual tasks and simultaneous interpreting” published in *Bilingualism: Language and Cognition* 9 (2), De Groot and Christoffels noted that research on translation and simultaneous interpreting has not been a part of ‘the mainstream psycholinguistic work on language control’ expressing at the same time their belief that the investigation in these areas is “likely to inform and qualify models of language control based on monolingual-task studies” (De Groot and Christoffels 2006: 189). The authors suggested that the study of translating between two languages of a bilingual person (here the term bilingual is used to refer to all the people who are able to use two languages for communication), “where the term TRANSLATING covers all forms of language use, written and oral, where a message expressed in one language (the SOURCE language) is rephrased into another language (the TARGET language)” could become a complementary source of data for a common approach in studying bilingualism based on “testing the bilingual participants in monolingual tasks” (2006: 189). The examples given above and many others show that the study of translation has been vastly absent in the areas which deal with these aspects of language which are intrinsic to the act of translating, bilingual knowledge, bilingual memory, language control and language processing and cognitive aspects of language acquisition and use. Nevertheless, De Groot is quite emphatic in her conviction that studying translation has a lot to offer saying,

All in all, I believe cognitive psychology should embrace translation as an object of study. Doing so would be bound to increase our understanding of the human intellectual potential. In their turn, the new insights in translation performance to be acquired from these intensified research efforts could result in practical recommendations for both the training and the professional practice of translators and interpreters (1997: 31-32).

Indeed and what seems a welcome change translation as a valid area of investigation has begun to feature in mainstream books and journals on bilingualism. For example “*The handbook of bilingualism*” edited by Kroll and De Groot (2005) includes in part IV ‘Aspects and Implications of bilingualism’, section ‘Cognitive consequences’ a chapter, “Simultaneous interpreting: cognitive perspective” by Christoffels and De Groot. Still, the article by De Groot and Christoffels (2006) is an exception

where psycholinguists look at translation (actually at simultaneous interpreting) as a human skill.

The above trace of interest in translation as a skill carries a promise of what James Holmes advocated over 30 years ago when he called for a collective effort, “teamwork between specialists in a variety of fields – text studies, linguistics (particularly psycho- and socio-linguistics), literary studies, psychology, and sociology. *And* with the involvement of practicing translators” (Holmes/Broeck 1994: 101). Similar willingness to integrate findings and cooperate is voiced on the part of the TS community (Jääskeläinen and Tirkkonen-Condit 1991, Tirkkonen-Condit and Jääskeläinen 2000, Tabakowska 2001, Hejwowski 2004, Cronin 2005, Kiraly 1997) although it remains largely singular.

In consequence there has been little scientifically valid cooperation between different research communities, i.e., applied linguistics, psycholinguistics, cognitive psychology and Translation Studies although there has been a common practice of borrowing research methods or the object of study. To illustrate, translation process studies borrowed the method of thinking aloud from introspective psychology (Börsch 1986) and cognitive psychology studied word translation to investigate the structure and organization of bilingual mental lexicon (Gollan and Kroll 2001). Yet, there have been little if any cooperation and mutual exchange of the results and implications of empirical studies carried out in different areas. A 1997 publication entitled *Cognitive processes in translation and interpreting* edited by Shreve et al. was an exception and a precious expression of the need for interdisciplinary studies in translation process research but the issue of translation expertise development remained implicit and theoretically debated rather than empirically explored. It is even possible that it is Translation Studies which despite its interdisciplinary premises have shown more reluctance for a possible synergy and willingness to draw from and share with other disciplines. Possible reasons include the constantly growing awareness of the complexity of issues involved in language processing in translation and the reluctance to try and decompose the process in order to see how various sub-skills blend together in the multitasking intrinsic to a translation activity. A more recent publication, and a follow-up to *Cognitive processes in translation and interpreting* entitled *Translation and cognition* (Shreve and Angelone 2010) is another attempt to encourage interdisciplinary cooperation between cognitive studies and translation process studies. Still translation expertise research remains marginal. On the part of Transla-

tion Studies, it remains to be acknowledged that applied linguistics in general and more specifically its sub-disciplines such as psycholinguistics, sociolinguistics or neurolinguistics as well as discourse approaches to functional linguistics, translation and language teaching/learning may have a lot to offer to the field which ever since its beginnings has searched for more feasible research methodologies.

It seems that what is really needed to study translation as a broad cluster concept is a biodiversity of mind (Tymoczko 2005). It is generally agreed by now that translation is a highly complex cognitive process embedded in the social and cultural context but its underlying cause is in language barriers which have to be removed via language processing at the level of its physical (verbal) and conceptual (nonverbal) representation, which involves an interplay of cognitive and psycholinguistic operations with many non-linguistic aspects involved. Needless to say the final product, the message which lifts the language barriers also arrives in the form of language. We do need to look at what applied linguistics, psycholinguistics and cognitive studies have to offer to understand “what takes place in the translation process” (Holmes 1988: 95-96), before we can know how translation expertise develops. As it stands now over 20 years after Holmes’ seminal work was published,

There are few if any “hints” for translators to follow; there are no commonly accepted inventories of techniques, strategies or procedures that need to be acquired through classroom exercises and implemented in clearly categorized problem situations; there are no translation methods, which, if carefully learned and applied, will lead the translator to the “right” solutions. Translation is the epitome of an ill-structured domain – the translator’s personally mediated yet personal history of experience makes as the interface for a succession of unique occurrences of intercultural communication (Kiraly 2005a: 122).

The above view may sound harsh, but perhaps a harsh assessment is the best way to provoke more research into translation expertise development. At the time when “Translation is the Language of Europe”<sup>7</sup>, and when it becomes more and more appreciated that translation has always been the language of the world, what is needed is a collaborative effort and open-mindedness to retrace the course of evolution of translation as a human

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<sup>7</sup> Said once by Umberto Eco and frequently quoted in the context of the EU.

skill taking into account all possible manifestations of the human ability to translate. The major responsibility in this respect lies on the part of Translation Studies which with no detriment to itself can become an all-inclusive discipline devoted to the study of all forms and facets of translation.

### 1.8. Conclusions

To sum up, this chapter was devoted to establishing common grounds. The issues which were, subjectively, considered important for contextualizing the discussion on the genesis and evolution of translation as a human skill were presented and wherever possible supported by the opinions of other scholars to make them a part of the ongoing debate among scholars from the discipline of Translation Studies and other related disciplines. Translation as a complex cluster concept demands an open minded broad perspective to recognize and acknowledge its various forms and functions. Some effort was made to ensure the clarity of vital concepts such as translation ability, translation skill and translation competence and expertise, which are believed to be essential if one wants to avoid misunderstandings in the way these terms can be, and indeed have been used. The major framework has been set out for the developmental perspective in which the progression from translation as a predisposition, a mere potential to translate shared by all human language users (also if the language is non verbal like sign language or any other socially shared system of communication) opens the developmental continuum. First the human translating mind will realize this potential in the form of ability (usually untrained) like in the case of natural translators to be discussed in chapter 3. Then the untrained ability may through repeated experience develop into a skill which allows for a more fluent and more self-conscious performance. Then the developing translator may decide to make a conscious and deliberate effort to further the translation skill and progress towards translation competence to be discussed in chapter 4. Finally following extensive practice the skill supported by competence may reach the level of expertise. The consequences of the actual position on the developmental continuum of translation as a human skill will be visible in the quality of the translation performance. The distinction between the developmental stages as well as the common lack of understanding of the development which is needed to produce fully competent translation products meeting professional quality standards results in the social misconceptions about translation as a human skill.

The framework is by no means new and it might even seem to have always been a tacit assumption present in the work of Toury (1995), Gile (1995), Kussmaul (1995), Kiraly (1995, 1997, 2002), Cronin (2005) and many others involved in translator training as theorists and practitioners. Unfortunately however, the above appreciation of translation skill development in its continuity has not been taken up by researchers (PACTE 2003) and the genesis of translation as a complex professional expertise is yet to be retraced and uncovered in its full evolutionary spectrum. A lot of empirical and experimental effort is needed to perceive the skill of translating as an outcome of the social need and human desire to communicate with others. It is my hope that looking at how the skill is built on bilingual foundations and how it is demonstrated by those who have not received any special training for it, and by those who are trained, or otherwise develop translation competence and work as practicing translators, will show the evolutionary continuity of translation expertise development. By taking an empirical approach grounded on theoretical premises my aim is not to de-mystify translation as a special skill reserved for the gifted few, “the language elite” (Ivanova 1998: 92) but to draw attention to some aspects of translation expertise which if given more attention might help to understand the seemingly mysterious nature of translation as a human skill. In this approach I do not treat translation as an art or a craft but as an intellectual skill to be researched and explored in its developmental continuity. Like Mona Baker (1992) said in *In other words*, I believe that professional translators should not be satisfied with saying that they translate because they have a flair for it but just like other professionals they should be able to explain what they do and how they do it as well as how they have acquired and developed their translation expertise.

It seems natural to start the investigation with the bilingual foundations which make translation proper possible by providing access to two languages which one person is able to use for communication. Every translator is a bilingual (either acquired or natural) who uses the potential of the human translating mind to enable otherwise impossible communication when language and culture are a barrier which cannot be removed otherwise than through translation. Chapter 2 will focus on these very foundations, the bilingual knowledge of a potential translator with attention paid to the recent advances in the study of bilingualism, language and cognition which are valid and revealing for sketching out the psycholinguistic profile of a translator-to-be.



## Chapter 2

*Whoever learns a new language becomes a new person*  
*Rosi Landi (1973: 33)*

### **Bilingual foundations of translation ability**

This chapter will examine critical issues in the bilingual knowledge of a translator-to-be. Since every translator is first a bilingual but not every bilingual will choose to become a practicing translator a thorough insight into the nature of bilingual knowledge is a necessary starting point. In the evolutionary perspective on the development of translation expertise the knowledge of two languages is only a starting point, a mere but essential prerequisite. The purpose of this chapter is therefore to throw some light on issues involved in the bilingual proficiency of a translator-to-be. The issues raised in this chapter include: the nature of the linguistic knowledge of L1 and L2, bilingual<sup>1</sup> language users, interaction between two languages in one mind, bilingual memory, language control and the cognitive effects of bilingualism. Although it is generally agreed that sufficient mastery of two languages does not guarantee that a bilingual person (whether a natural bilingual or an L2 user) will make a good translator, “bilingual competence constitutes a psycholinguistic foundation upon which it is possible to develop translation competence” (Presas 2000: 20).

#### 2.1. Bilingual foundations and Translation Studies

Although many issues are debatable in the development of translation as a human skill at least one is certain and refers to all confused concepts discussed in chapter one. Translation ability, translation skill and translation competence and expertise require the knowledge of at least two different languages. Whether one calls it a mere prerequisite or a vital requirement

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<sup>1</sup> I use the term ‘bilingual’ in a broad liberal sense of anybody who can communicate on an everyday basis in two (or more languages) although I remain aware that it is not a commonly shared view especially in Translation Studies. To quote, “The term ‘bilingual’ is very much abused and the number of people who are truly bilingual is very small” (Samuelsson-Brown 2010: 25).

to translate, bilingual knowledge is the decisive factor to be able to consider interlingual translation as an activity which one can perform. The fact is so obvious that it has frequently been taken for granted together with its consequences for the development of translation as a skill and translation as professional expertise. As observed by Presas (2000: 27), “comparative studies of monolingual and bilingual individuals reveal that the acquisition of a second language involves the development of certain cognitive features which are of interest for translation teaching”. Such capacities as lateral thinking, flexibility and the ability to make remote associations (Ben Zeev 1977, Appel and Muysken 1996) coupled with “greater skill in handling the linguistic code, due to the fact that bilinguals learn to separate the mental content of the lexical element from its graphic or aural form at a very early stage” (Presas 2000: 27 see also Bialystok 2001) seem to be what is needed for translation as a human skill.

The standard requirement to enter translator training programmes is that those who want to become translators or interpreters should have mastered their second or foreign language (L2) to native-like proficiency. The mastery of the first language is taken for granted and rarely given more consideration. There are two striking consequences which underlie the native-like proficiency requirement. First, it is implied that mastering an L2 is a finite state, and secondly it assumes that every native speaker is highly proficient in his or her L1 in the way that is best suited to acquire translation skills (see chapter one). In view of the present knowledge about language and bilingualism both assumptions are false. To quote, “The individual’s first language, taken for granted in SLA<sup>2</sup> research, is complex and shifting. The L1 construct is an abstraction, a snapshot of a moving target” (Cook 2007: 208). The linguistic knowledge of one’s L1 is never finite and fixed so how then can the knowledge of L2 be expected to be fixed and set as native-like proficiency?

Although today the general agreement points to the complexity of translation as a cognitive process and many translation scholars do not fail to acknowledge the bilingual foundations of translation competence not much research has tried to draw insights from how the bilingual foundations are laid and focused on the desired outcome: sufficient mastery of the translator’s working languages (Presas 2000: 20). However, it is rarely specified what such mastery in fact includes or admitted that achieving it

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<sup>2</sup> Second Language Acquisition.

is a tough task. Taylor's (1990: 1) observation may serve as an example: "Translation or interpretation teachers may prefer to work on translation or interpreting skills as separate entities from language ability, considered as a *sine qua non* but taken for granted". Dodds (1999: 58) evaluates this attitude as "an unrealistic position of convenience assumed by those of us who would ideally delegate the laborious aspects of the job, i.e. teaching the language, and be left with the more interesting task, i.e. translation and interpretation". This apt remark points to the mutual dependence between bilingual knowledge and translation as a human skill.

The relevance of bilingual knowledge for our understanding of the evolution of translation expertise is what is understood well in Machine Translation (MT) research, much less attention, however has been paid to it in Human Translation Research. The following quote can serve as an illustration,

Human crafted rules for creating an MT system capable of translating any kind of text, for example, are considered to require an effort in the order of 500 to 1,000 person years, and building a specialized bilingual system (in the order of 10,000 concepts) would require approximately 100 person years (Ke Ping 2009: 167).

Have Translation Studies put enough effort into investigating the bilingual foundations of translation competence? Are there many studies devoted to the evolution of translation as a human skill or to that particular stage in the process of evolution called bilingualism conducted from the perspective of a developing translator? Or do we still believe that translators are born and not made (Nida 1981: 402, 2001: 89)?

Mona Baker in her introduction to *In other words* wrote:

if translation is ever to become a profession in the full sense of the world, translators need something other than the current mixture of intuition and practice to enable them to reflect on what they are doing and how they do it. They will need, above all, to acquire a sound knowledge of the raw material with which they work to understand what language is and how it comes to function for its users (Baker 1992: 4).

Presas (2000) notices a gap in the way translation skill is viewed as devoid of its bilingual foundations saying:

It is undoubtedly true that during the past decade interest in how learners learn has grown, and the resulting studies have shed much light on

the problems faced by novice translators and on the strategies they employ to deal with them. However, it may well be that not enough attention has been paid to the root of the problems they experience, nor to the bases of translation competence. I would suggest that both might stem from their bilingualism (Presas 2000: 19).

The above quote is reflected in Walters (2005) view that looking into the translator's language acquisition history can provide revealing data for the development of translation as a human skill. It is a trivial observation that solid foundations make strong buildings. For a layman, foundations though are something that one does not see and may be unaware of their vital importance. For an expert, the quality of the foundations is essential in the long run as it guarantees long-term benefits and in contrast to other elements of a construction, it is something that cannot be changed without demolishing the constructed building. To continue this simile it should be also added that the way the entire structure is later on used and exploited will also bear consequences on the overall condition of the foundations. In other words translation expertise is built on bilingual knowledge and there is a lasting relationship based on mutual benefit between them both throughout the translator's developmental journey from a novice to a professional. For this reason only bilingual knowledge deserves more detailed attention. However, the acquisition and use of the second or foreign language has to take into account a wider picture of the nature of human language/languages so that the processes and difficulties in the use of one's L1 and L2 which are frequently reflected in translation products become more tangible.

## 2.2. The nature of human language and the knowledge of two (or more) languages

"Most people, including some highly educated ones, seem to have little idea of just how complex language is" (Cattell 2006: 160). The question, 'what does it mean to know two languages?' evokes a more fundamental question of 'what does it mean to know a language?' As a consequence all the epistemological gaps in our understanding of linguistic knowledge (Saleemi 2006: 13) will also refer to our understanding of bilingual knowledge. Issues such as the relationship between thought and human language (see Chomsky 2006, Pavlenko 2005, 2009) remain current challenges for linguists (including psycho and neurolinguists) and language philosophers alike. Yet, paradoxically as it may seem it is learning another language that

has a revealing effect on one's knowledge of the native language (see Keskés and Papp 2000). Without subscribing to any rigid theory of language and going into unnecessary details, let us establish some basic assumptions about linguistic knowledge which are believed essential when discussing the bilingual foundations of translation expertise.

Human language is first and foremost a code subserving a powerful need to communicate, that is to exchange information in order to achieve some intended aim or in simple terms to get things done. It is a highly complex system based on the shared knowledge of signs (letters, sounds, words) and rules (grammar at all linguistic levels) for their combination used to share meaning within a given language community. Language as a code for communication or mind-sharing (Donald 2001) can, on the one hand, be represented as knowledge (Chomsky 1964), on the other as social practice (Gardner 1979: 193, Pavlenko et al. 2001) which makes linguistic forms inseparable from their socio-culturally established meanings, connotations or innuendos. The complex nature of meaning in language reflects this dual nature of human language, as knowledge and as social practice. The linguistic knowledge of one's native language is subject to socially agreed rules of linguistic behaviour (cf. Paradis 2009 and his notion of 'discourse grammar') which form some kinds of conventions marking out a socially conditioned network of mutual expectations between users of the same language. Interpreting contextually relevant meaning is a dynamic process of inferential comprehension (Sperber and Wilson 1989) which apart from ruled governed word combinations and the semantic values ascribed to individual words involves the extralinguistic factors of the whole communicative situation as well as one's entire cognitive repertoire of lifelong accumulated knowledge (Fauconnier 1998). To quote:

The more I think about language the more aware I become of all the backstage cognition needed for understanding and meaningful use of language. The forms become only a kind of prop, a powerful means of prompting dynamic on-line constructions of meaning that go far beyond anything explicitly provided by the lexical and grammatical forms (Fauconnier 1998: 251).

This 'backstage cognition' is what one acquires together with the first language and what evolves and becomes redefined throughout one's life parallel to the life experiences (Paradis 2007). Language in this context is

primarily a tool for communication and the way the tool is used in actual communicative situations is determined not only by linguistic competence (implicit knowledge of grammar in the broad sense including phonology, morphology, syntax and the lexicon) but by communicative competence (Hymes 1971). Defined by Canale and Swain (1980) it includes four essential components:

1. grammatical competence: words and rules
2. sociolinguistic competence: appropriateness
3. discourse competence: cohesion and coherence
4. strategic competence: appropriate use of communication strategies

It is not enough to know the rules and the words which can be combined according to the rules to use language for communicative purposes. Since the use of language is intentional (we speak when we want to speak) and purposeful (it is used to achieve something, even if it is talking to oneself), and mostly geared at interacting with others (including oneself as other as in the case of talking to oneself), its use is governed by what Paradis calls 'discourse grammar', the tacit socially conditioned rules of language behaviour which guide the language user in the choice of appropriate linguistic means from the rich inventory offered by linguistic (grammatical) competence. The pragmatic component is frequently decisive for how successful a particular communicative encounter is. Yet, there are other important components which contribute to the way language is used to communicate with others, namely discourse competence which refers to the speaker's ability to structure an utterance or the entire interaction, or a piece of writing. To guarantee, or at least safeguard a successful exchange of information (even if the vague word successful means in fact satisfactory for the participants) the language users can use various communicative strategies which they themselves judge appropriate in a given situation. As noted by Paradis (2009) the use of language is intentional and driven by motivation, a strong desire to communicate with others. The interplay of all the components of communicative competence in language use usually remains so implicitly ingrained that many people in everyday exchanges are hardly aware of it (Cattell 2006: 160).

In first language acquisition (L1) we acquire all the components determining language use simultaneously and holistically. In our native language all the aspects of one's linguistic knowledge are acquired inciden-

tally that is without conscious effort and remain encoded at a level which for most is deeper than our conscious knowledge (see Paradis 2009). In other words we follow the rules without being aware of them since when acquiring our first language most communicative operations become automatized to the point that we apply the rules in the form of procedures without being aware of the complex computations that are behind them. As pointed out by cognitive psychologists and sociolinguists the use of language is a part of more complex cognitive structures and the procedures of its use are encoded together with the prototypical scenarios of usage. These situational concepts have been termed as frames, scripts or schemas and constitute what Fauconnier (1998: 251) called the backstage cognition essential in language use.

In second language acquisition (L2) excluding natural simultaneous bilinguals, however the situation is completely different. When a monolingual comes to learn another language, the complexity of language both as knowledge and as social practice might appear overwhelming. Although the research devoted to how people come to appropriate another language has been branded Second Language Acquisition Studies (SLA) some scholars including Paradis (2004, 2009) insist that the word acquisition should be reserved to native language as people do not acquire another language but learn it making a conscious effort to internalize all the relevant knowledge. Consequently, Paradis (2004, 2009) is emphatic about recognizing the distinction between the procedural and declarative status of all the knowledge components involved in language acquisition and use. Linguistic competence is implicit and acquired incidentally that is without conscious effort to acquire it and is represented by procedural knowledge (knowing how) which is sustained by procedural memory. Native language users rely primarily on linguistic competence that is they use language without being aware of all the computational procedures which are involved in stringing words together to make meaningful utterances. The other three components including pragmatic knowledge, metalinguistic knowledge and motivation are also necessary for effective communication and each component “relies on its own specific neural substrate, which is susceptible to selective impairment” (Paradis 2009: x). While linguistic competence relies primarily on the left hemisphere, pragmatic knowledge (Paradis’s (2009) ‘discourse grammar’) which refers to socially appropriate use of language and contains all the subtle data which help language users choose the most fitting expressions for a

particular situation is subserved by areas of the right hemisphere. Metalinguistic knowledge defined as the more technical knowledge of a language (Bialystok 2001) being conscious is declarative in nature (knowing that) and is sustained by declarative memory. Motivation, the drive to communicate engages the dopaminergic system and will have a significant effect on language performance “modulated by a range of affective factors that result in great variability among second language learners” (Paradis 2009: x).

The overlap with the components of communicative competence distinguished by Canale and Swain (1980) is significant: linguistic competence overlaps with their grammatical competence, pragmatic knowledge with sociolinguistic competence, metalinguistic knowledge is utilized in discourse competence and strategic competence and motivation drive the strategic behaviour of a language user (see Whyatt 2009a).

What is important, and perhaps most important, in Paradis’s (2009) argument is the fact that the way people employ the four components is substantially different for one’s native language and for one’s second language/languages. In the use of our native language if we are motivated to use it (motivation is the primary requirement because language use is voluntary) we mostly rely on our linguistic competence and pragmatic knowledge. Metalinguistic knowledge, the knowledge and awareness of language as a system of communication, the ability to focus on how we use it and reflect on its formal properties is available, but not necessarily referred to in the actual use of L1. When using L2 however, L2 learners (those who learn another language for future use) and L2 users who according to Cook (2002) use another language for everyday communication tend to rely primarily on metalinguistic knowledge especially if the second language has been taught by formal instruction and learned as explicit declarative knowledge (knowledge that) Paradis in his recent book, *Declarative and Procedural Determinants of Second Languages* (2009) explicates that the more formal the language instruction the more L2 users rely on their knowledge of the rules they should apply to make correct sentences. However, if the teaching methods are more communicative and if the learners are provided with practice in communicative situations they are more likely to develop implicit linguistic competence. When however the L2 users experience gaps in their L2 linguistic competence they will resort to their metalinguistic conscious knowledge of the L2, or as proved by the transfer research (Odlin 1989) they will use their L1 knowledge to find a solution in their



communicative endeavour. If the L2 is not learned by classroom instruction but, for example by immersion in the L2 culture (like in the case of immigrants), L2 users rely on their pragmatic knowledge and their metalinguistic abilities when lacking L2 linguistic competence.

Although we are still far from understanding how the human mind copes with two language systems (to be demonstrated further on in this chapter) acquiring or learning a foreign language is possibly one of the most common experiences in today's world. Scholars agree that the number of people who can speak more than one language most probably vastly exceeds the number of people who are monolingual (Cattell 2006). Furthermore, the constant growing need to learn foreign languages (see the EU directive for 2010) is stimulating the search for new more effective teaching methods to speed up the learning process and make its outcome more satisfactory. In response to modern multilingual tendencies Kesckes and Papp (2000) suggested that the Chomskyan (1986) question, 'What constitutes knowledge of language?' should be replaced by 'What constitutes knowledge of languages?'

Carroll (1994) reminds that although individuals on average by the age of five develop the competence of a 'native speaker' of their native language. This kind of development,

takes precedence over the acquisition of skills in reading, writing, and certain more specialized skills. Individuals tend to become differentiated in levels of those other skills only at ages beyond the age of five or so. By the time of adulthood, however, the individual differences in various specialized language skills can become quite pronounced, and substantially independent of each other (Carroll 1994: 145-146).

These idiosyncratic differences in the way people use language and exhibit different skills in for example making speeches or writing letters, or showing more preference for listening rather than speaking when in the company of other people are also important factors which somehow have not been given much attention in SLA studies. It is possible that these differences in L1 use might be relevant when studying those who choose to study foreign languages and then perhaps become translators. Kesckes and Papp (2000) suggested that one of the best ways of understanding one's native language is indeed to study a foreign language. To understand one's L1 and L2 seems essential for translating between the two languages. Therefore, the question how the knowledge of two languages

is organized in one mind is the first to ask in the study of the genesis and evolution of translation as a human skill.

What does it mean to be bilingual in the sense of being able to communicate with ease in two different languages? What are the bilingual foundations on which the translation skill can be built? Let us devote some attention to a bilingual (or multilingual) individual as our potential translator-to-be.

### 2.3. A bilingual person

For many people the term bilingual refers to a person born and brought up in a bilingual family for whom using two languages is a normal way of life. Referred to as true bilinguals, natural bilinguals or simultaneous bilinguals, they acquire two languages by ‘immersion’, i.e., by natural reaction to the sounds made by its environment in order to communicate with it (Thiery 1978: 146). Yet and most probably the majority of people who are bilingual in the sense that they can communicate in their two languages learn their second language later on in life, either by immersion in the L2 culture or, at school as children, or as adults. As observed by Keskés and Papp (2000) in their introduction to *Foreign Language Mother Tongue* intensive foreign language learning is a special case of multilingual development. In the modern understanding of bilingualism everybody “including all individuals who actively use, or attempt to use, more than one language, even if they have not achieved fluency in the second language (L2)” (Kroll and De Groot 1997: 170) is a bilingual person. Thiery’s (1978: 146) opinion that “no matter how well one speaks a language, if he has learned it by tuition, he cannot be considered a true bilingual” has been discarded. As observed by Beatens Beardsmore (1982: 8), ‘true bilingual’ in Thiery’s sense is in fact a rare if not a ‘non-existent species’. “The condition of being in at least two languages appears increasingly to be the natural condition of having any language at all. More precisely, the concept that a human being might be confined to one language appears increasingly to be a fiction” (Holquist 2003: 21). Instead the prevailing view is that the knowledge of more languages is “the perfectly normal condition of the human mind” (Cook 1991: 115).

Webster’s dictionary gives a simple definition, ‘bilingualism’ a noun describes the quality of ‘being bilingual’ where ‘bilingual’ means:

- a. Using or able to use two languages, especially with equal or nearly equal fluency.
- b. Using two languages in some proportion in order to facilitate learning by students who have a native proficiency in one language and are acquiring proficiency in the other: bilingual training; bilingual education.

Such a liberal definition shows that one is dealing with a complex phenomenon (see Pavlenko 2005 on treating bilingualism as a monolith) and the different routes that one follows to become a bilingual person will bear consequences on the way bilingual knowledge is organized and used. Parallel to different language acquisition histories, there will be differences in “oral and written proficiencies as well as daily patterns of language use” (Haritos 2003: 1). Weinreich (1953), the unquestioned precursor of recognizing the consequences of different routes to bilingualism divided bilinguals into subordinate, coordinate and compound, referring to the way they have come to acquire their two languages. Weinreich (1953) believed that the route of L2 acquisition is reflected in the way the mental lexicon is organized. Natural bilinguals by growing up in one reality where two different labels (L1 and L2 word) are attached to the same concept (or mental representation) are compound bilinguals. L2 learners who acquire their L2 via their L1 are initially subordinate bilinguals (they access their L2 via L1) or coordinate bilinguals (they develop separate conceptual stores for each language) but with advances in their L2 proficiency they also become compound bilinguals (De Groot 2002).

Although the term bilingual is now used in a more inclusive manner, there are still some misconceptions about what it means to be bilingual. On the one hand, the monolingual view of bilingual knowledge places high expectations of native-like mastery of both linguistic systems. On the other hand, empirical research shows that the native-like mastery of the two linguistic systems (at all levels of language use including pragmatics) is rare even among natural or early bilinguals (Grosjean 1982, Paradis 2009). As observed by Ewert (2009: 57), “The requirement that bilinguals be native-like in their two languages led to a view of a bilingual as two monolinguals in one person, with two separate linguistic systems. As the proficiency requirements were relaxed and wider segments of the human population began to be studied by bilingualism researchers, it became obvious that a perfect balance between the two languages is extremely rare”. Pavlenko (2005) reminds that Green (1998) cautioned against approaching all bilin-

guals in the same way because they may have different levels of expertise and different competences in their two languages (Pavlenko 2005: 437). To quote, “some researchers treat bilingualism as a monolithic phenomenon and thus do not pay attention to linguistic trajectories of their study participants” (Pavlenko 2005: 437). These misconceptions do not only refer to a layperson’s view but also bear consequences for the worldwide research community. Therefore it is essential for those who study bilinguals to define the bilingual status of their study participants as they may differ considerably in terms of their language expertise in their two languages which may affect research results and lead to distorted conclusions (see Paradis 2005, Green 1998, Grosjean 2002, Pavlenko 2005). This word of caution is usually safe-guarded by researchers describing their subjects as ‘balanced bilinguals’ – bilinguals who have roughly equivalent abilities in the two languages (Malakoff and Hakuta 1991). Others use quite vague terms, for example, some researchers describe their subjects as ‘more or less fluent bilinguals’ or ‘somewhat more fluent bilinguals’. As pointed out by Heredia (2008), without an objective measure to classify bilinguals according to their second language competence or knowledge interpreting research results becomes problematic. “To date, there is no universally accepted method of assessing bilingual proficiency” (Haritos 2003: 1). It is generally undisputable that the major factor in establishing one’s bilingual knowledge is the history of the process in which it was acquired.

The recognition of different routes to bilingualism draws attention to the different starting points a prospective translator can set off from, which will bear consequences on how his or her bilingual knowledge is organized prior to the intentional development of translation ability to reach the level of expertise. Yet, Translation Studies as a discipline has not devoted due attention to the nature of bilingual knowledge or the language acquisition history of potential as well as practicing successful translators. Let us now consider natural bilinguals and L2 learners and users as prospective translators with the aim of throwing some light on the intricate relationship between bilingual knowledge, language acquisition history and the human ability to translate.

### 2.3.1. Natural bilinguals and translation ability

According to common expectations a true or natural bilingual is expected to be equally fluent or ‘nearly equally fluent’ in both languages. Beatens

Beardsmore (1982: 8) referred to such a person as an ‘ambilingual’, that is a person “capable of functioning equally well in either of his languages in all domains of activity and without any traces of the one language in his use of the other”.

As cautioned by Grosjean (1982), himself a natural bilingual and a scholar committed to the study of bilingualism, this layperson’s monolingual view of bilingualism does not match the reality. Bilingual in his opinion is a person who uses two languages in everyday life and not a person who knows the two languages equally well. According to Grosjean’s (2002) *Complementarity Principle*, it is essential to remember that a bilingual uses his/her two languages (separately or together) for different purposes, in different domains of life and with different people. Because the needs and uses of the two languages are different, a natural bilingual is in fact rarely equally or completely fluent in the two languages (Grosjean 2002: 2). For this reason, a bilingual should be perceived as “an integrated whole, a unique and specific speaker-hearer, and not the sum of two monolinguals” (Grosjean 1997: 163). “He or she has developed competencies (in the two languages and possibly in a third system that is a combination of the first two) to the extent required by his or her needs and those of the environment” (Grosjean 1997: 163). Therefore as suggested by Grosjean, it is important to view the use of both languages in terms of language modes (Grosjean 2001) forming a conceptual continuum between a monolingual mode (when a bilingual uses one of the languages) and a bilingual mode (when both languages are partially or entirely involved, e.g., as in language mixing, code switching and translation). This holistic view of bilingualism stands in contrast to “the public misconceptions of bilinguals” being two monolinguals in one mind. As Grosjean (2002) explains this monolingual view of bilingual knowledge on the one hand makes many natural bilinguals feel inadequate and on the other the implied expectations of equal language proficiency in both languages make fluent bilinguals, who have acquired their second language via formal instruction, feel inferior and unlikely to call themselves bilingual. Grosjean’s position is firm, “bilingual is not the same as two monolinguals in one” (Grosjean 1997). To quote,

The reasons that bring languages into contact and hence foster bilingualism are many: migrations of various kinds (economic, educational, political, religious), nationalism and federalism, education and culture, trade and commerce, intermarriage, etc. These factors create various linguistic needs in people who are in contact with two or more languages and who

develop competencies in their languages to the extent required by these needs. In contact situations it is rare that all facets of life require the same language (people would not be bilingual if that were so) or that they always demand two languages (language A and B at work, at home, with friends, etc.). This leads to what I have called the complementarity principle which I define as follows: Bilinguals usually acquire and use their languages for different purposes, in different domains of life, with different people. Different aspects of life normally require different languages. It is precisely because the needs and uses of the languages are usually quite different that bilinguals rarely develop equal and total fluency in their languages. The level of fluency attained in a language (more precisely, in a language skill) will depend on the need for that language and will be domain specific (2002: 4).

This empirically grounded understanding of how natural bilinguals use their two languages disqualifies the ‘public’ expectation of equal mastery of both linguistic systems and gives grounds to claim that because natural bilinguals use their two languages in different communicative settings the range of the vocabulary in both languages may in fact be substantially different or even poorer in some domains than in case of a monolingual person. This consequence does not create favourable conditions for their ability to translate. Translating in a professional sense requires rich vocabulary in both languages as well as adequate control to keep the two languages clearly apart to avoid cross-linguistic interference. Nida (2002) in his paper entitled “Translator’s confrontations with false ideas about language” given in the European Commission states:

Too often people assume that the best translators are fluently bilingual and bicultural, but actually this is not always true. In fact, some people who are constantly shifting back and forth between two languages are not always the best translators because they are not fully sensitive to what is precisely the most fitting expression in a particular receptor language. The best translators are those who are fully sensitive to usage in their own mother tongue and extremely well informed about the cultures of the source language from which they translate. Knowledge of the source culture often proves more important than linguistic expertise (Nida 2002).

The view that natural bilinguals may not make the best translators, however, does not mean that they are not able to translate. They are usually very much appreciated natural translators (chapter 3 will explore these issues) and their natural ability can of course be intentionally developed into translation expertise (the focus of chapter 4). Although I am not

aware of any statistical data concerning the ratio of professional translators who are natural bilinguals and those who learned their second (Language B) or third (language C) working language in a foreign language classroom, I am inclined to expect that the majority of practicing translators of today are in fact former language learners. If research shows that even in natural bilinguals, and contrary to common expectations, there is an imbalance between the two languages, it can be expected that this imbalance will be more pronounced among those who learn their second language and at least in theory can become translators.

### 2.3.2. Bilingual competence of L2 learners as potential translators

The majority of those who are not born in bilingual families gain access to their second language later on in their life (Grosjean 1982, Hamers and Blanc 1990), and most frequently after they have acquired, at least partially their native language (L1 or language A in TS terminology). Originally referred to as coordinate bilinguals (Ervin and Osgood 1954, Weinreich 1953) depending on the onset of their L2 acquisition they can be classified as ‘early versus late’ bilinguals (Genesee and Nicoladis 2006, Paradis 2009).

People come to acquire communicative skills in their L2 in the process of learning. It is generally acknowledged that learning a foreign language to achieve a high level of proficiency (native-like standards of communicative competence) takes a lot of time and effort on the part of the learner and on the part of the teachers (see Whyatt 2009b). It has become clear that whether via formal teaching and learning in schools or via unstructured exposure to the way L2 is used, the learning process aims at internalizing all the components of communicative competence. It is somehow less frequently acknowledged that in fact the aim of L2 teaching and learning is developing an extremely complex skill of communicating in another language.

According to cognitive theories of L2 acquisition, “learning a language entails a stage wise progression from initial awareness and active manipulation of information and learning processes to full automaticity in language use” (O’Malley and Chamot 1990: 217). In the information processing model L2 learning is viewed as “the movement from controlled to automatic processing via practice (repeated activation)” (quoted after Mitchell and Myles 1998: 86). This progression from controlled to

automatic processing “results in a constant restructuring of the linguistic system of the L2 learner (...). When the shift occurs, controlled processes which consume a large share of the students’ attentional resources are freed to deal with a higher level of processing” (ibid.). In a similar manner, Anderson (1980/2005, 1996) in his ATC (Adaptive Control of Thought) model views learning a second language as a process through which declarative knowledge about the language (knowledge that) becomes transformed into procedural knowledge (knowledge how) via practice. To quote Anderson (1980),

When we learn a foreign language in a classroom situation, we are aware of the rules of the language, especially just after a lesson that spells them out. One might argue that our knowledge of the language at that time is declarative. We speak the learned language by using general rule-following procedures applied to the rules we have learned, rather than speaking directly, as we do in our native language. Not surprisingly, applying this knowledge is a much slower and painful process than applying the procedurally encoded knowledge of our own language. Eventually if we are lucky, we can come to know a foreign language as well as we know our native language. At that point, we often forget the rules of the foreign language. It is as if the class taught declarative knowledge had been transformed into a procedural form (Anderson 1980: 224).

Paradis (2009) is of a different opinion and claims that a clear distinction should be made between the way we acquire our L1 and learn our L2. While the knowledge of L1 is indeed procedural, the knowledge of L2 is declarative and consciously learnt knowledge. In his view if a second language is learned after the first language has been acquired, it will not result in implicit linguistic competence comparable to that of one’s native language. Depending on the teaching method the knowledge of the second language will result in the different application of the four components of communicative competence in L2 production. If the teaching is carried out via formal instruction, the learner’s declarative memory will be involved and the learner will gain metalinguistic knowledge of the facts about language (for example, that double negation is not allowed in English). When the teaching methods applied are more direct and communicative, the learner’s procedural memory will be engaged and it may result in acquiring implicit linguistic competence. Although Paradis does not mention it, it can be expected that those people who learn their second language by immersion (direct contact with the language as in the case of



immigrants) will with time develop some kind of implicit competence but in their L2 use will most likely rely on pragmatic knowledge. Undoubtedly in both routes of learning an L2 motivation is central to the ‘appropriation’ (term used by Paradis to refer to conscious L2 learning) and use of second languages, and when present it will improve performance. Since the implicit linguistic competence of L2 learners and users (I refer to Cook’s (1992) distinction here) is very much incomplete and may even be non-existent, when using the L2 speakers rely on metalinguistic knowledge and pragmatic knowledge to compensate for the gaps. Although the role of L1 in the process of learning an L2 has not been discussed by Paradis, it is very likely that L1 competence is also used together with metalinguistic knowledge to facilitate L2 performance at least at the very early stages of foreign language learning. Since linguistic competence and metalinguistic knowledge are subserved by different kinds of memory they can be used simultaneously, e.g., metalinguistic knowledge can be used to monitor L2 performance, spot production errors and self-repair them. If the L2 users rely on their metalinguistic declarative knowledge they use their L2 in a controlled (conscious) way, if the L2 learners rely on their implicit procedural knowledge they use the language in an automatic (not open to conscious control) way. As put by Paradis (2009: x), “Practice will either speed up controlled processing or promote implicit competence (or both, to different extents and at different times)”.

Although the question of the automaticity of L2 knowledge has been challenged by Paradis (2004, 2009) other scholars make slightly different predictions about the so called ultimate attainment and automaticity in L2 production. Kroll and Linck (2007: 250) while agreeing that “increased speed and accuracy alone does not indicate increased automaticity” refer to Logan’s (1988) instance theory of automaticity according to which the increased efficiency of processing can be explained by the memory retrieval process. According to Logan (1988) processing can take two routes. One involves the computation of every step using some kind of algorithm. Every computation however leaves a memory trace of the process. The more frequently the computation is performed (increased practice) the stronger the memory trace is left. Future processing thus does not have to compute the individual steps but involves the memory trace of the steps that have to be performed. In this so called ‘race model’ automaticity “is considered to be attained when the memory retrieval process is

completed more quickly than the algorithmic process, thereby increasing the efficiency of processing” (Kroll and Linck 2007: 250). This explanation challenges Paradis’s sceptical view of automaticity in L2 and opens up new avenues to investigate the development of cognitive procedures which enable fluent performance in L2. Indeed,

even if we suspect that we have no chance to ever achieve near native competence, all of us would probably still set it as our ideal goal, and try to draw as near to it as possible. When seriously learning a foreign language, we work on our accents, memorize grammatical patterns, try to learn as many words as possible, try not to fall for false friends and to avoid interferences. Taken together, this clearly means that bilingual competence is what we ultimately aim for in foreign language learning (Hentschel 2009: 16).

Needless to say, it is an aim which is achieved by few and it is possible to speculate that perhaps better results in terms of L2 proficiency could be achieved if the foreign language teaching methodology recognized the dynamic nature of bilingual development in which there is a constant interaction between the learner’s two languages (Cook 1992). It is possible that this dynamic interaction, the ongoing battle for dominance between the learner’s two languages if brought to the attention of the learner himself/herself could prove helpful in developing L2 proficiency (Witte 2009). However, L2 teaching methodologies still keep trying to make L2 learners acquire L2 just like they came to acquire their mother tongue. The communicative or direct method, for example completely disregards the fact that L2 learners are already L1 users in the belief that eliminating L1 from the L2 learning context will enhance the development of linguistic competence in L2. All is done in the hope that the use of L2 will become as automatic as the use of L1 and therefore as native as for native language users. This aim is frequently shared by L2 pedagogy and L2 learners themselves. Only recently, more scholars point to translation tasks as a potential ally in engaging the learner’s both languages for the benefit of enhancing their bilingual knowledge in its entirety where it includes much more than the linguistic knowledge (see chapter 3 for a detailed discussion). It seems that the human ability to translate can indeed be seen as the fifth skill of a bilingual person who can: speak either of the two languages, write in both languages, read and exhibit listening comprehension as well as translate between the two languages. All the skills are determined by the level of L2 proficiency. Translation, though in contrast with the other skills involves simultaneous

conscious activation of the two languages and therefore it can be expected to be determined by L2 proficiency and by other capacities to be discussed in the following chapters.

To sum up, irrespective of the course of L2 acquisition or learning, all bilinguals can use either of their two languages for communication, experience interference and are able to translate between them (Fabbro 1999). Recent psycholinguistic experiments and neurolinguistic studies confirm that both languages remain active in the bilingual mind even if only one is actually being used (Green 1993, Thierry and Wu 2007). Second Language Acquisition Theories have continuously attempted to explain the nature of this unique co-existence of two languages in one mind. The dynamic interaction between the two languages in the bilingual mind is of interest in the discussion of translation as a human skill as it will allow to understand the translation process which on the one hand, involves the conscious simultaneous activation of both systems and on the other hand imposes a requirement to keep both systems apart in order to avoid (or control) interference. Looking at the dynamic co-existence between L1 and L2 throughout the process of L2 acquisition provides a deeper insight into the nature of the bilingual knowledge of a potential translator and is to some extent determining the course of evolution of the human skill to translate.

#### 2.4. The interaction of two languages in one mind – an L2 learner's perspective

The question how the knowledge of two different linguistic systems is accommodated in one mind is one of the most intriguing ones. Answering it is most likely to bring a worldwide revolution in teaching and learning foreign languages but for the time being there are only some speculations. As pointed out by Paradis (2005: 411), however although research has provided some interesting insights since Albert and Obler (1978) formulated a number of fundamental questions for bilingualism research, we are still probably quite far from being able to provide a complete understanding of bilingualism and multilingualism.

In the context of L2 teaching via formal instruction the relationship between the two languages is best perceived in terms of progressive dynamic interaction. The course of the way in which the two languages will influence each other is determined by several factors. The two most

frequently described include the bilingual age (hence the distinction between early and late bilinguals) and the teaching methods (explicit instruction versus more communicative methods). An extended list of factors could also include the level of L2 socialization, everyday contact with the L2, frequency of L2 and L1 use, purpose of using L2, motivation, future prospects, etc. The dynamic nature of the way the native and the foreign language influence each other has been discussed by SLA scholars and psycholinguists and the debate over L1 – L2 interaction has itself evolved from a conservative perspective into a more liberal approach. Although the “[g]hosts from the past like ‘language interference’, ‘negative transfer’, etc. still make their presence felt” (Witte et al. 2009: 3) when the native language is mentioned in the foreign language classroom, more politically correct taxonomy is being used, like ‘cross-linguistic influence’, or ‘language contact’. The awareness of the cross-linguistic interaction, no matter whether it is expressed in the form of transfer or interference and understanding the mechanism behind it is crucial for understanding the bilingual foundations of translation expertise. Let us briefly review the nature of the dynamic L1 and L2 interaction as revealed by transfer research.

#### 2.4.1. Cross-linguistic interference

The concept of interference or cross-linguistic influence (Jarvis and Pavlenko 2008, Pavlenko 2009) is crucial in understanding the interaction between two or more languages in the learner’s mind. Interference can be present at all levels from phonology and phonetics (articulation) through lexicon and grammar (formulation) to the level of discourse (usage) in L2 performance. As put by Green (1993: 270), “Performance in L2 reflects the nature of the system that has been constructed” in the mind of the L2 learner. The increasing level of proficiency in L2 is usually accompanied by a decrease in L1 interference. Originally and in most general terms the word transfer was used to show that L2 learners when unable to cope with the complexities of their L2 use will use their L1 knowledge (Andersen 1983). The phenomenon of language interference stigmatized in the foreign language classroom for obvious reasons shows the dynamic interaction between the two languages in a bilingual mind and although it is frequently noticed in the form of negative transfer from L1 to L2 the reversal is also possible although it has become a focus of interest only quite re-

cently (Ewert 2009). Kesckes and Papp (2000) insist that both L1 and L2 affect each other in the sense that some aspects of L1 or L2 knowledge can be transferred to each other.

As pointed out by Odlin (1989) it is not only the similarity between the two languages that causes transfer (see Selinker 1992: 260 on Weinreich's 'interlingual identifications'<sup>3</sup>) but transfer can be also due to differences between the learner's two languages (Kellerman 1995). Although as pointed out by Odlin (1989) a lot of transfer research focused on morphology, syntax and lexis, the phenomenon is present at all levels of language as well as at the underlying conceptual level (Pavlenko 2009). In brief as noted by Kesckes and Papp (2000) transfer occurs at two levels, structural where it affects the units and patterns of language and at the higher conceptual level where it affects pragmatics and knowledge in general and results in transferring discourse patterns, forms of address and other language specific patterns of behaviour as well as L1 and L2 specific concepts. Yet, as claimed by Pavlenko (2005, 2009) pragmatic and conceptual transfer has not received sufficient attention although it frequently leads to more serious cross-cultural misunderstandings than for example, lexical transfer (Arabski 2006). Translation practice has a rich store of mistranslations caused by conceptual and pragmatic transfer (Korzeniowska and Kuhiwczak 1994, Korzeniowska 1998, Schäffner 1998, Whyatt 2006c).

#### 2.4.2. Three perspectives on bilingual coexistence in a single mind

In early SLA theories, e.g., Selinker's (1972) interlanguage theory, transfer and more precisely negative transfer was perceived only in one dimension as an L1 interference into L2 and has been stigmatized as leading to errors (Sridhar 1994: 802). Transfer errors were believed to be typical of the learner's interlanguage, defined as a separate system, in between L1 and L2. Since all the systems L1, L2 and interlanguage were seen as separate the interlanguage theory did not acknowledge the constant bidirectional interaction between the learner's L1 and L2. This clear cut isolation of the language systems in the learner's mind has become increasingly questioned by researchers from various disciplines including cognitive studies, psycholinguistics and neurolinguistics (see Cook 1992).

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<sup>3</sup> The identification of two items as the same across linguistic systems.

Cook (1992) returning to Weinreich's idea of the coordinate versus compound distinction formulated the multicompetence theory noting that, "[s]ince the first language and the other language or languages are in the same mind, they must form a language super-system at some level rather than be completely isolated systems" (Cook 2003: 2). The learner at the first contact with the L2 perceives both L1 and L2 as separate systems (coordinate) but in the process of learning L2 both languages come to interact with one another along what Cook called the integration continuum. The integration continuum demonstrated in Fig. 1 shows the possible relationships languages enter in the multicompetence theory.

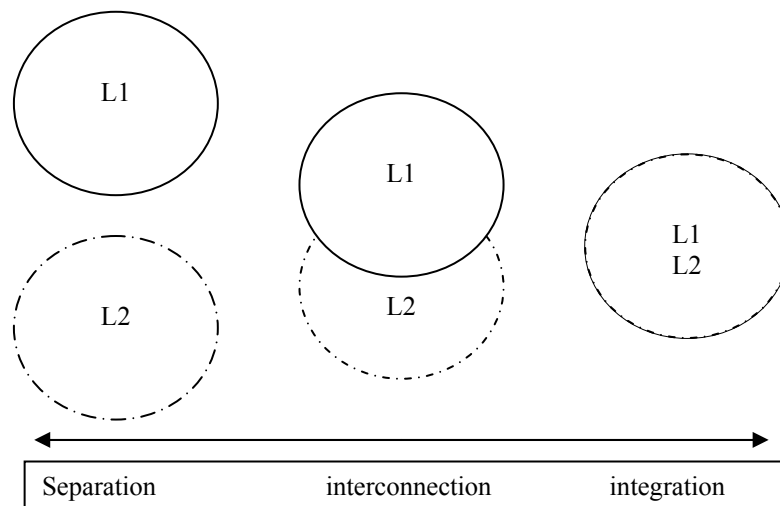


Fig. 1. The integration continuum of possible relationships in multicompetence (adapted from Cook 2002: 11).

Multicompetence which was originally defined as a “compound state of a mind with two grammars” (Cook 1991: 112), and redefined later on as “the knowledge of more than one language in the same mind” (Cook 2002: 10) has an interesting contribution to offer in terms of dynamic cross-linguistic interaction. First, as stressed by Cook multicompetence is a different state of mind than monocompetence, second, the two languages are perceived as interconnected to a greater or lesser extent in the mind of the L2 learner and this interdependency will bear consequences for the way both languages are processed in one mind. To quote, “switch-

ing from speaking the L1 to speaking the L2 may not be taking one grammar off-line and replacing it with another, but weighting the parts of one overall system, i.e., ‘holistic multicompetence’” (Cook 1991: 115). The relationships between the languages in multicompetence can vary along several dimensions (Cook 2002: 12-13):

- Different relationships can apply to different areas of language.
- The relationships might change according to the stage of development or of language attrition.
- The closeness of languages may affect the relationship.
- The relationship might vary from one person to another (quoted after Ewert 2009: 37)

Pointing out the factors which may affect the level of integration/separation between L1 and L2 will have consequences on how the L2 user processes both languages also when translating between them. Hall, Cheng and Carlson (2006) criticized Cook’s model on three grounds (for details see Ewert 2009: 37): “(1) a view of L1 and L2 language knowledge as distinct systems; (2) the presumption of a qualitative distinction between multicompetence and monocompetence; and (3) the assumption of homogeneity of language knowledge across speakers and contexts” (Hall, Cheng and Carlson 2006: 220). Instead, Hall, Cheng and Carlson (2006) claim that the two languages of a bilingual form one system in which forms belonging to different languages are nothing more than contextual variants.

In their reconceptualised multicompetence model Hall, Cheng and Carlson (2006) shift focus from the cognitive to a social-interactional perspective (Firth and Wagner 1997, Firth and Wagner 2007). All language knowledge is always “provisional and sensitive to renegotiation and renewal” (2006: 230). The dynamic view of language knowledge refers to all the linguistic codes a person might know and it is essentially experience derived knowledge. In this respect monolingual and bilingual speakers differ according to the differences in their language experience. This view reminds very much of Grosjean’s Complementarity Principle discussed in the section on natural bilinguals. The quote that “all language knowledge is socially contingent and dynamic no matter how many language codes one has access to” confirms the analogy (Hall, Cheng and Carlson 2006: 229). Different language experiences lead to differences in knowledge referring to L1 and L2. The language knowledge of individuals is perceived as “dynamic constella-

tions of linguistic resources” (Hall, Cheng and Carlson 2006: 226). There is no distinction between linguistic competence and performance:

rather than a prerequisite to performance, language knowledge is an emergent property of it, developing from its locally-situated uses in culturally-framed and discursively patterned communicative activities. Language structures, as conventionally conceptualized, are simply post-hoc observations of the continually shifting patterns and schemas we employ to negotiate specific contexts of action (Hall, Cheng and Carlson 2006: 228).

Both perspectives on the constantly dynamic relationship between L1 and L2 knowledge in the mind of the L2 learner allow to see bilingual knowledge as linguistic resources which are at the language learner’s/user’s (or translator’s) disposal. The assumption that every language experience will have a reciprocal effect on the knowledge structures is in line with the cognitive principles. Learning an L2 via practice (repeated activation) “results in a constant restructuring of the linguistic system of the L2 learner” (McLaughlin and Heredia (1996) quoted after Mitchell and Myles 1998: 86). However, it is practice in communicative situations which internalizes grammar by placing on the user certain requirements to comply with the rules of discourse these communicative situations are a part of (cf. Paradis 2009). As pointed out by Ewert (2009: 43), “[t]hese inherently dynamic and variable constellations of linguistic resources are subject to stabilizing forces of societal norms that value constancy”. Thus, “stability in language knowledge has its roots in socioculturally contextualized activity” (Hall, Cheng and Carlson 2006: 229).

The dynamics in bilingual knowledge is further developed by employing the mathematical theory of dynamic systems which change over time (van Geert 1994: 50). Herdina and Jessner (2002) formulated a Dynamic Model of Multilingualism (DMM) in which there is room for all aspects of the co-existence of two languages in one mind. First, the two languages of a bilingual person are seen as systems nested in a larger multilingual system which itself is nested in the system of human cognition. The person who is learning a foreign language is also a dynamic system in interaction with his or her social environment. The different linguistic systems of a bilingual speaker are interconnected and interdependent and therefore subject to bidirectional transfer at all levels of language from phonology to discourse. Recent studies in the structure of the bilingual mental lexicon (to be discussed below in more detail) point to a more complex interaction at the



structural and what was previously disregarded at the conceptual level (Kroll and Linck 2007: 246). It seems that in the language learner's mind there is a constant battle for dominance between the two language systems and even very proficient L2 users and learners cannot switch their L1 off. In this battle it is the language which is most frequently used that will be more readily available to the point that the actual label L1 and L2 do not reflect language dominance but only the order of language acquisition. As observed by Heredia (2008) in the case of immigrants, for example it is in fact the L2 that is dominant and frequently the L1 by not being used falls into attrition. This perspective points to the social factors which condition the interaction between both languages and general cognitive processing in a language user who is constantly engaged in culturally situated (either in L1 or L2) social interaction (Ewert 2009: 46).

Following the recognition of the interdependencies connecting bilingual knowledge in the L2 learner's/user's mind, the term language interference or negative transfer is replaced by more liberal terms like cross-linguistic influence taking off in this way the blame from the L2 learner/user for being unable to suppress interference. Other scholars, e.g., Kesckes and Papp (2000) keep using the word transfer as the best description of the actual processes of L1 and L2 interaction. In this work I use all three terms: influence, interference and transfer as describing instances of cross-linguistic interaction.

To sum up answering the question whether bilingual knowledge is a single system or two partially integrated systems (Ewert 2009: 39) is not essential for recognizing its importance as the foundations of translation ability, competence and expertise. What is the most significant aspect of the bilingual knowledge of potential translators is its dynamic nature and the constant interaction of the two linguistic systems in one mind. This interaction or cross-language competition (Kroll and Linck 2007) is what bilinguals experience all the time. As put by Grosjean (2001)<sup>4</sup> they move between their monolingual and bilingual modes and choose the mode they will communicate in according to the socio-pragmatic context. Sometimes they will fail to control interference, sometimes they will code-switch or blend and mix languages. However, what is natural and accepted in everyday communication is not acceptable in professional translation. The first contrastive requirement is that professional translation places definite

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<sup>4</sup> See also De Groot and Christoffels (2006).

demands on keeping the two languages apart and is very much intolerant to cross-linguistic interference. This implies that a kind of control over the bilingual's two languages needs to be operating in the bilingual mind. Séguinot (1997: 117) observed that "interferences occur all the time between semantically and graphically related words both within and across languages. Some mechanism is required to suppress unwanted connections as well as activate those that are required...". The implication of such a mechanism points to the need for cognitive control in bilingual language performance (Rodríguez-Fornells, et al. 2006) which would ensure the retrieval of information relevant for the task to be performed (e.g., a target language word) while suppressing all the irrelevant information (e.g., a source language word) in the long term memory. The fact that the amount of negative transfer especially at the structural level decreases parallel to growing L2 proficiency while the amount of positive transfer at the conceptual level increases points to the increased control over the two systems. Consequently, developing the skill of translation will involve learning to control undesired interference and keeping the two languages safely apart. This kind of cognitive control over bilingual knowledge does not come easily and certainly not without the conscious awareness of cross-linguistic interference as a part and parcel of bilingual language processing. The notion of language control suggested by Green (1986) deserves a more detailed discussion as an important aspect of language processing for a prospective translator.

## 2.5. The notion of language control

Although the leading question behind Green's model of language control (IC Model – Inhibitory Control Model) was to describe how the mind knows which language to use in a particular moment (see Penfield 1953 and Penfield and Roberts 1959 on the language switch mechanism<sup>5</sup>), the issue of control can be perceived as global (inhibiting one language while using the other) or local, e.g., inhibiting some outputs of the system while activating others, as for example in choosing one lexical item out of several competing equivalents in language production or in the process of

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<sup>5</sup> Contrary to Penfield and Roberts (1959) and their simple language switch mechanism the model presented by Green is a variant of the model proposed by Morton (1980) and was initially restricted to the recognition and production of words in two languages.

translation (see De Groot and Christoffels 2006). Such a perception of language control is important for the bilingual's ability to translate which involves constant switching between the two languages as well as controlling interference. As stressed by Green (1993) language control will use a considerable amount of mental resources therefore it is possible that it contributes to the overall mental effort needed to translate. The high energy demands are pronounced in oral translation and especially tangible in simultaneous interpreting. Although there are obviously also other factors influencing high energy expenditure in interpreting, the need for language control is a contributing factor which however has not received much attention in the empirical studies of translation and interpreting.

Green's model rests on the assumption that for a bilingual speaker although only one language is selected the other one nevertheless is not completely deactivated (Ervin and Osgood 1954; Preston and Albert 1969). This dual activation is believed to account for the fact that bilinguals take longer to name objects (Altenberg and Cairns 1983 on lexical decision tasks) and are prone to errors of interference (Grosjean 1982) which to be avoided place sometimes heavy demands on the cognitive resources of the bilingual speaker and are difficult to avoid especially when the resources are taxed by stress or fatigue (Dornic 1980, Clyne 1980). According to Green (2000: 376) normal fluent speech can be seen as a successful avoidance of errors and slips and mistakes demonstrate the temporary disruption of varying degrees of severity in the form of language which is produced and ultimately point to a control failure<sup>6</sup>. Green (2000: 376) illustrates his observation with the following example:

Transient failures include errors when we blend two or more words together. Within a language we find blends such as "strying" (blended from "trying" and "striving") and across languages we find ones such as "Springling" (blended from "spring" and "Frühling". In such cases, it is evident that the normal speaker can recognize that an error has been made and can also produce an appropriate utterance (Green 2000: 376).

What is more the joint activation of the two languages allows the bilingual to code-switch between expressions from either of the two languages depending which one reaches the activation threshold first. Code-

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<sup>6</sup> As pointed out by Walters, the construct was borrowed from cybernetics and information processing where it was simply defined as 'avoidance of error' (Walters 2005: 68).

switching and mixing languages (inserting an L2 form in an otherwise L1 utterance) is frequently done by bilinguals when in the company of other bilinguals showing that the need for language control is determined by the actual communicative circumstances. Usually, however, and in more formal communicative interactions bilinguals tend to keep their two languages apart and to do so Green is emphatic that they have to execute language control to inhibit undesired output and interference. In other words Green aims to explain most things that bilinguals do: keep their two languages apart, mix them in code-switching, translate and experience interference.

Yet, as pointed out by Green (1993: 255) most L2 acquisition theories “fail to address the control issue explicitly” and despite the recent advances in the psycholinguistic studies of bilingualism still not enough is known about how the use of two or more languages is controlled by the L2 learner at various levels of the language acquisition process. If however learning a foreign or second language is considered as a case of acquiring a complex cognitive skill and the use of language is perceived within the general theory of action (Davidson 1980), the notion of control is indeed essential to understand both the gradual mastery of the skill and its subsequent use. To quote:

One of the fundamental features of the human bilingual brain is its capacity to control which language to use at a given moment and in a given context, both for speech comprehension and production. This specific cognitive mechanism, referred to as the “language control” or “language selection” mechanism, allows bilinguals, for instance, to communicate in one language rather than in another, and to switch back and forth between languages during the same conversation, depending on the preferred language of the interlocutors. It also allows to implicitly identify the language of heard or written words and to produce words in a selected target language, while minimizing the interferences from the nontarget language (e.g., by preventing interferences from the native L1 during production in a weaker L2) (Abu-talebi et al. 2007: 1).

Green (1986, 1993, 1998) in his inhibitory control model focused on the control requirements in using language (see Walters 2005: 70) and suggested that “non-pathological language use not only requires intact language (sub) systems and intact connections between them but also the means to activate and inhibit these systems and to inhibit inappropriate

outputs of the systems” (quoted after De Groot and Christoffels 2006: 190). Green suggests (1986) that speech production can be understood as skilled action in general. “In particular, the selection of a word, like the selection of a particular action, involves regulating a single underlying variable of the amount of activation. Choosing an appropriate word requires ensuring that its activation exceeds that of its competitors” (Green 2000: 407). Therefore a notion of activation and inhibition based on the assumption that the two languages are constantly present in the mind of the bilingual speaker is essential for understanding language control. Activation and inhibition require energy and use up the available resources<sup>7</sup>. If the resources are diminished by such factors as stress, fatigue or by excessive processing demands, performance failure may occur as a result of insufficient control (see also Paradis 1998).

Green distinguishes three stages of activation of the two linguistic systems: selected (when in use), active (not in use but able to exert effects on processing) and dormant (stored in the long term memory but not used and therefore not having much effect on on-going processing). Since both languages can or have to be active at the same time in the case of translation or interpreting the language performance is more prone to “involuntary intrusion” (Green 1993: 263) that is interference. However, simultaneous activation can also facilitate language processing due to spreading activation across languages. In other communicative interactions, it can help interlocutors to avoid disruption in their speech production by code switching which bilinguals do if the context allows (Grosjean 2001). In tasks which require control of interference as is the case in translation attentional resources are required and used up since the intervention of the supervisory attentional system (see Norman and Shallice 1986) or the central executive in the working memory model (Baddeley 1986, 1996) is needed to ensure strict control over language production. What is stressed by Green and currently confirmed by psycholinguistic experiments (De Groot and Christoffels 2006) language selection is only partially a matter of increased activation of one language but mostly it operates by suppressing the activation of the other language. Hence, Green named his model the Inhibitory Control model (IC model in Fig. 2).

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<sup>7</sup> Green observes that most functional models of speech production ignore this energy requirement “and yet we would not normally consider the description of a working device as complete without some account of how it is powered” (Green 2000: 407-408).

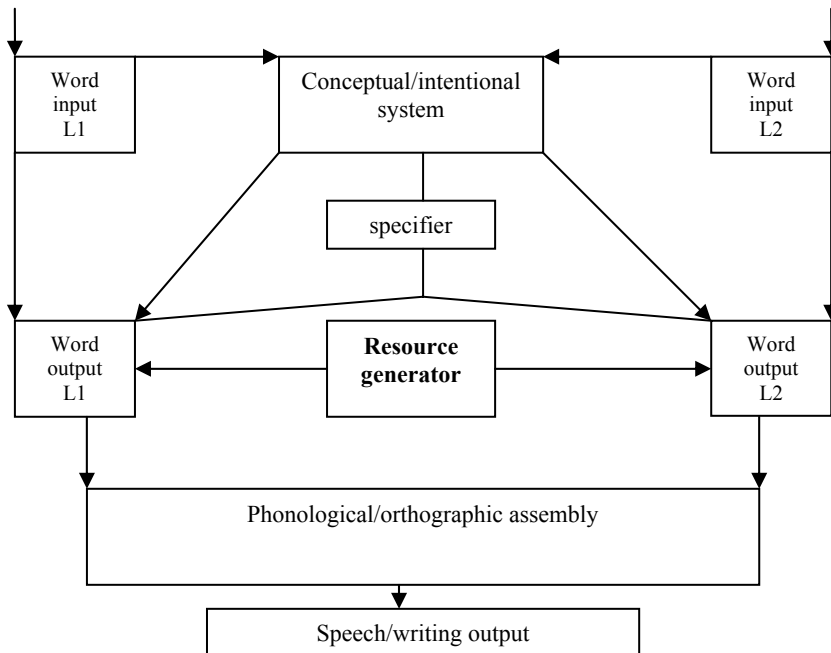


Fig. 2. The functional control circuit in bilingual production (Green's Inhibitory Control Model (1986) adapted from Walters 2005: 70).

In his model described by Walters (2005: 67) as a 'general purpose processing model' Green takes on the distinction of three independent functional processing components: conceptualization, formulation, articulation which operate during language production (see Levelt 2001). The IC model focuses on lexical processing and is prepared to encompass "a range of phenomena in both bilingual and language impaired performance, in particular speech disfluencies, code-switching, and translation" (Walters 2005: 67). There, are however two conditions that have to be met to bring about language control: explicit intention and language tags on both word meanings (lemmas<sup>8</sup>) and word forms (lexemes). Green similar to La Hej (2005 quoted

<sup>8</sup> in psycholinguistics the lemma is in fact an intermediary level between word meaning and the word's form (lexeme) and apart from the meaning component it includes information about the syntactic behaviour of the word before the phonological form is selected (i.e. the meaning is lexicalized). Many scholars however do not distinguish between the semantic level (the level of conceptual meaning and lemmas and treat them as one level in contrast with the lexical level (see Caramazza 1997 and Paradis 2009).

after De Groot and Christoffels 2006: 195) draws a parallel between language tags in bilinguals and tags in monolinguals for style and register<sup>9</sup>. Initially (Green 1986, 1983) the model was based on a fairly simple operating principle. In L2 production there is increased activation of both L2 meanings (lemmas) and forms (lexemes) while L1 lexemes are suppressed at the level of articulation. In interference or in code switching, as mentioned earlier, there is a competition at the level of phonological assembly and the word which reaches the activation level first is the one which is produced/articulated. In his later elaboration of the IC model Green (in Price et al. 1999) introduces the condition of multi-tasking to his notion of control in bilingual processing (see Walters 2005). Drawing an analogy between bilingual production and the Stroop effect<sup>10</sup> Green explains that when asked to translate a printed word, “bilinguals have to avoid naming the printed word and, instead, produce a translation equivalent as a response” indicating in this way that the concept of selection, competition and suppression/ inhibition are the major processing notions in bilingual production. To account for the versatile multi-level nature of control Green uses the procedural notions of schemas and goals. Schemas, following Norman and Shallice (1986), are best perceived as “networks detailing action sequences... that individuals may construct or adapt on the spot in order to achieve a specific task...” whereby language is perceived as “a form of communicative action” (after Walters 2005: 72). Green (in Price et al. 1999) explains that schemas are procedural in nature in the sense that they use the declarative representation of the instructions and become ‘methods’ to achieve the intended goals by gaining the control of action. Green claims that the control is multi-level (global or local) and the schemas are task specific: low level (articulation), intermediate (lexical decision tasks and translation) and high level (business

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<sup>9</sup> La Heij (2005) suggested that a language cue is present at the preverbal stage which specifies which language is going to be used. Lemmas are also tagged for language so the outcome of the “complex access, simple selection process” depends on the overlap between the cue and the information in lemmas.

<sup>10</sup> The Stroop effect in psychology named after John Ridley Stroop (1935) demonstrates the reaction time taken by a task in which a person is asked to name the colour printed in a name denoting a different colour, i.e. the yellow colour ink is used in the word red. The person asked to name the colour has to suppress the meaning of the word ‘red’ and say ‘yellow’ naming the actual colour. The Stroop test has consistently shown that naming of a colour takes longer and is prone to more errors when there is a conceptual mismatch between the printed word and the colour than when the colour and the word refer to the same colour (i.e. the word “blue” is printed in blue ink).

meetings, written production and conversational interaction). Although the reason why translation requires an intermediate level of control is not explained by Green, it is possible to expect that he refers in his example only to single word translation and not to translation as an act of communication which as such would have to require a high level of control.

The goal to carry out a “linguistic act” is controlled by a coordinated effort involving three components: the executive or Supervisory Attentional System (SAS see Norman and Shallice 1986) which is responsible for non-automatic behaviour and specifies which language is to be used. This central specification is then passed to the task schemas (as instruction ‘to translate’, ‘to name pictures’, etc.) which “compete to control output from the lexico-semantic system” by adjusting the activation levels of representations and by inhibiting outputs” (Walters 2005: 72). At this point, the primary question is what drives the intentional system. Walters (2005: 73) claims that it is the social and pragmatic motivations (cf. Paradis 2004, 2009), the situational context and the participants (Grosjean 1997) that drive the control model<sup>11</sup>.

To sum up, Green’s notion of language control can “provide an alternative means for understanding both the development and the breakdown of performance in L2” (Gollan and Kroll 2001: 331). The notion of control allows one to explain the competence – performance divide in L2 learners who make mistakes. Although as observed by Gollan and Kroll (2001: 332) a reservation has to be made that performance errors can be a mixture of insufficient control and poor representation of the weaker language. Yet, the same notion of language control is valid for native language users who make slips although they “have intact cognitive and linguistic representations” with unimpaired links between them. In language use as in any other skilled action slips occur because of temporary problems with control which cannot be executed appropriately if the resources

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<sup>11</sup> Walters (2005), SPPL (Socio-Pragmatic Psycho-Linguistic) model attempts to integrate the sociopragmatic and psycholinguistic aspects of bilingualism which have a potential to point to some areas in SL learning which overlook the close connection between the social identity and cognitive perspective involved in the acquisition and use of one’s bilingual knowledge. The model also favours the holistic view of language assumed by Hymes (1971) in his notion of communicative competence. The SPPL model of bilingualism is grounded on the assumption that the L1 and L2 information is rooted in the social world, and language choices are possible at every stage of production from intention (conceptualization) to articulation.



are insufficient (Green 1993). Séguinot (1989) studying translation performance in professionals noted that mistakes are made when the information processing demands exceed the capacity for the control of actions.

The main asset of Green's IC model is the focus on cognitive resources and energy requirements. In this respect the notion of control fits in with the cognitive view of the mind as a limited capacity processor (McLaughlin and Heredia 1996: 213). According to the cognitive principle learning is perceived as a movement from controlled to automatic processing via practice that is the repeated activation of the newly acquired knowledge (see Anderson and his Adaptive Control of Thought model, 1983, 1985). Learning a new language is considered as learning any other complex skill where practice propels the continuous movement from controlled processing which requires a lot of attentional expenditure to automatic processing which provides more mental resources for other aspects of language use, such as for example concentrating more on the content, self monitoring, etc.

The notion of language control in bilingual processing opens other issues inherent in different uses of language. Translation, which is the focus of the discussion in this work, will obviously place different requirements within Green's model than, for example writing an essay in English or participating in social interaction. The metacognitive control over the translation process requires efficient mental effort management in which language control may consume a considerable amount of cognitive resources especially in novice translators. The importance of the bilingual's ability to control the two languages at the lexical level can be expanded to the need to control all other linguistic levels from phonology to discourse. Avoiding interference is what translators learn to do throughout the course of developing their translation proficiency. Green's model of inhibitory control has several implications for the study of translation as a human skill. First of all, it accounts for the limited cognitive resources which have to be well managed to perform the task (Whyatt 2010). Gile (1995/2009) used the term coordination effort to refer to the need to control the translation process, which as suggested by De Groot and Christoffels (2006) performs the function similar to Green's concept of language control. Secondly, the need to control languages at the same time implies that language switching which occurs in the translation process all the time will have its cost in terms of mental energy and attentional demands of the translation task. As pointed out by Costa and Santesteban (2004) the language switch cost will

differ depending on the level of L2 proficiency and language dominance. Paradoxically, however, behavioural research shows that the cost of switching back to one's stronger language (usually L1) is higher, possibly showing that undoing the stronger inhibition takes a relatively longer time (see Pavlenko 2009: 13). Thirdly, it assumes constant cooperation between the working memory of the translator and his/her long term memory where all the bilingual knowledge is deposited and might be at any time of the translation process urgently needed. When code-switching in translation, the translator voluntarily and consciously aims to keep the two languages apart during the formulation and articulation (or written text production). Yet, if the language control mechanism is not efficient enough the TL text might still show interference which contrary to code-switching is involuntary (see Presas 2000: 26 quoting Beatens Beardsmore 1982: 110) and most probably on a subconscious level (I will return to the notion of control and consciousness in chapter five). Finally, as pointed out by Bialystok et al. (2004) language control exercised in bilingual language use may have a positive effect on cognitive control in general (see Prior and MacWhinney 2010 on language switching and task switching) which is vital for mental effort management in the translation process in which language switching and task switching occur in proportions unmatched by other uses of a bilingual's two languages (Gile 1995, Whyatt 2010). It is also possible that because of the strict requirements for efficient language control in the translation process, translation tasks can be used in language teaching to enhance language control in bilinguals (Whyatt 2009b), an issue to be discussed in detail in chapter 3. Having introduced the notion of language control in bilingual language use (also in translation) let us provide some insight into the structure and organization of the bilingual's lexico-semantic system to fully understand the control requirements in a bilingual language user and a potential translator over his/her bilingual memory.

## 2.6. Bilingual memory

Linguistic competence as a component of communicative competence involves the knowledge of grammar and vocabulary. Grammatical rules are a finite set of patterns similar to mathematical algorithms which specify all the possible combinations of words which are considered acceptable in a given language. Knowing two languages presupposes the knowledge of two grammars and two lexicons. As observed by Vermeer (1992: 147), "Knowing

words is the key to understanding and being understood. Children acquire words first, and next the grammar of a language. The bulk of learning a new language consists of learning new words: grammatical knowledge does not make for great proficiency in a language". Since any linguistic action involves the use of vocabulary and translation tasks place some special demands on the selection of lexical items it is essential to devote some attention to the presently available understanding of the bilingual mental lexicon. As observed by De Groot (2002) psycholinguistic research into bilingualism has been dominated by two related questions referring to the representation and processing of vocabulary by bilingual speakers. The question of representation, "tries to decide whether bilingual memory contains two separate language specific stocks of knowledge, one for each of the bilingual's two languages, or, instead, a single stock that is shared between the two languages" (De Groot 2002: 32). Research into lexical processing tries to decide whether lexical processing is language selective and thus handled only by the 'contextually-appropriate language subsystem' or whether lexical processing is essentially language non-selective and thus handled by both of the bilingual's language subsystems which are assumed to form one unified system.

#### 2.6.1. The hierarchical structure of the bilingual lexicon

Research into the storage and access to the bilingual lexicon has focused on two aspects of lexical knowledge: the word's form (surface features, sound, spelling) and meaning (semantic content), and other aspects like for example, syntactic information about the possible combinations it can form with other words or pragmatic information about its contextual constraints in terms of usage have not been taken into account. In a way then, research into the structure and processing has chosen to treat the bilingual's mental lexicon as similar to a bilingual dictionary. Nevertheless, experimenting with this limited lexical information has allowed researchers to arrive at a basic conclusion that bilingual lexical memory is hierarchical in nature and consists of at least two layers of memory representations (or nodes), one layer stores meanings of words (lemmas) and the other layer stores their forms<sup>12</sup> (lexemes) (De Groot 2002).

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<sup>12</sup> Evidence comes from monolingual studies (Smith 1997) which showed dissociation effects between forms (lexical factors) and meanings (semantic factors). Reaction time experiments, for example showed that response time was shorter for strings of letters which were words than for non-words (Besner et al. 1990).

In the case of bilinguals the hierarchical structure of the mental lexicon has to account for the question whether the two languages are segregated or integrated at both levels, or at one of the levels. In other words, does the bilingual mind associate the English word *girl* with the same semantic representation (meaning, concept, mental image) as the meaning evoked by the Polish word *dziewczyna* or the French word *fille*? If this is the case then the bilingual lexicon is integrated at the layer of meanings (shared conceptual representation) but separated at the layer of forms (separate lexical representations). As pointed out by Paradis (2007) the bilingual memory in effect contains three stores (a three-store hypothesis): the common underlying conceptual base (CUCB) which is shared between the two languages (see Kesckes and Papp 2000) and two lexical stores, for the bilingual's L1 and L2. Evidence for the CUCB and separate lexical stores comes from translation-priming<sup>13</sup> or cross-language priming experiments which showed no effects of translation priming in data-driven tasks (focused on processing word forms, e.g. in fragment completion when the subjects are asked to fill in the missing letters in a word (el- - ph - nt = elephant, example from De Groot 2002: 35, see also Cieślicka 2005) or in lexical decision tasks which measure response times to strings of letters which form words or non-words. Gerard and Scarborough (1989) and Kirsner et al. (1984) reported the lack of differences in the response time (null-effects of translation priming) when a response to the word *apple* was preceded by its French translation equivalent *pomme* or a semantically unrelated *femme* (at least if the translation pairs consist of non-cognates that is completely different forms in the two languages). These findings allowed to conclude that the word forms are stored in two separate memory representations. In contrast a translation priming effect was obtained in conceptually-driven tasks (focusing on meaning such as free recall or a semantic decision task where participants are asked to categorize the words as e.g., concrete or abstract) for both cognate and non-cognate words. Semantic priming studies showed that a word (target) is processed (recognized) faster if it is preceded by a semantically related word (prime) than when it follows a semantically unrelated word. The semantic-priming effect was obtained when both prime and target were from the same language (Neely 1991) and when they were from

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<sup>13</sup> The term 'priming' refers to the finding that the prior presentation of a word (the 'prime') speeds up the processing of the same word (repetition priming) or another word (called the target) (e.g. Forbach et al. 1974).

the bilingual's two languages (Chen and Ng 1989; De Groot and Nas 1991). These findings of spreading activation in the conceptual/meaning store suggested that meaning representation of translation equivalents are shared between the two languages and form a single conceptual store, a common underlying conceptual base (CUCB). The question which immediately arises is: What are the connections between the three stores if the priming effect was obtained in conceptually driven tasks but not in data-driven tasks?

There has been a considerable amount of research examining the connections between lexical and conceptual representations (Kroll and Stewart 1994). The starting point was taken from Weinreich's (1953) classification of bilinguals on the grounds of their different language acquisition histories (see also Ervin and Osgood 1954) into coordinate, subordinate and compound bilinguals. Potter et al. (1984) assumed that the different sociolinguistic experiences of different bilinguals will lead to different organization of the three components and presented two models: the word-association model (Weinreich's subordinative model) and the concept mediation model. As shown in Fig. 3 the word association model predicts the route of L2 acquisition via L1 and demonstrates that the underlying conceptual representations can be accessed only via the bilingual's first language. On hearing an L2 word, for example 'door' one does not see the object (access its mental representation/concept) but first has to retrieve the Polish translation equivalent 'drzwi' and only then can access the meaning. As pointed out by De Groot (2002: 37), "the L2 word is in fact assigned the L1 word's meaning". Consequently, the conceptual capacity of the bilingual within the word association model equals the conceptual capacity of a monolingual L1 speaker. This kind of organization is characteristic of the initial stages of L2 learning although the direct communicative methods of teaching are aimed at minimizing the role of L1 in the process of L2 acquisition. By providing direct exposure to L2 efforts are made to make the developing bilingual lexicon fit the concept mediation model characteristic of natural bilinguals.

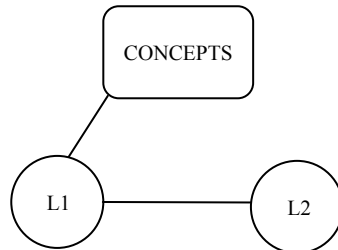


Fig. 3. A word association model (subordinative bilingualism) (adapted from De Groot 2002: 37).

In the concept-mediation model (Weinreich's compound model) both L1 and L2 lexical items have direct access to the conceptual layer (Fig.4).

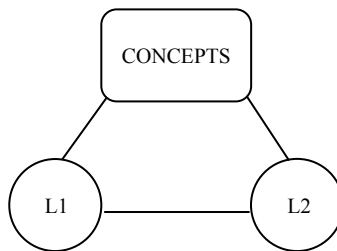


Fig. 4. The concept-mediation model (compound bilingualism) (adapted from De Groot 2002: 37).

It was suggested that with time and practice the word-association links can be gradually replaced by the direct concept-mediation links. This so called intermediate (Potter et al. 1984) or developmental model (Kroll and De Groot 1997) linked the nature of lexical and conceptual connections to the bilingual's level of proficiency (Gollan and Kroll 2001: 325). It was assumed that a word-association memory structure predicts longer response times (RTs) than the concept mediation model<sup>14</sup>. Yet, Potter et al. (1984) failed to obtain differences in reaction times between the non-

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<sup>14</sup> Note that in Potter's et al (1984) model the labels L1 and L2 indicate the order in which the two languages were acquired as well as the dominance (relative strength) of the two languages. However Heredia (1997) noted that the dominance issue is always relative to the way both languages are used. If the initially weaker L2 becomes the language of everyday communication it can become more dominant (stronger) than L1.

fluent and fluent bilinguals on picture naming that is a task known to activate access to the conceptual memory, and word translation (L1 into L2) tasks. Chen and Leung (1989) also compared RTs on picture naming and translation tasks between non-fluent and fluent bilinguals and found that the beginners responded consistently with the predictions of the word-association model that is the response time for L2 to L1 translation was faster than picture naming in L2. The proficient bilinguals' responses on the other hand, showed the concept-mediation retrieval patterns. Further research led to a proposal of the revised hierarchical model also referred to as the asymmetry model.

### 2.6.2. The revised hierarchical model (RHM)

Kroll and colleagues (Kroll 1993, Kroll and Sholl 1992, Kroll and Stewart 1994) concentrated on the strength of the connections between the three components of the bilingual lexicon and revised the hierarchical model to account for the asymmetry of lexical processing (see Fig. 5).

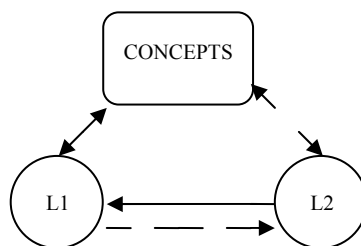


Fig. 5. The revised hierarchical model (RHM) (adapted from De Groot 2002: 39).

The model reflects the different level of proficiency (command of the two languages) or the ‘language imbalance’ due to “differential experience with the two languages, with L1 having been used more than L2” (De Groot 2002: 40). In a way the RHM combines the word-association and the concept-mediation model adding connections between the three components which differ in strength. A strong unidirectional connection holds between the conceptual layer and the L1 lexical layer whereas the link between the conceptual layer and the L2 forms is weak. The strong link between L2 to L1 remains and reflects the frequent practice of learning L2

words through associating them with their L1 translations (Kroll and Stewart 1994: 158). The connection from L1 forms to L2 forms is weak in comparison with the strong link between L1 forms and concepts.

De Groot (2002: 40) points to the developmental nature of the RHM which predicts that, “the processing of L2 by non-fluent bilinguals will parasitize L1 word forms more often than will L2 processing by proficient bilinguals” (note that a clear reference to the developmental aspects of cross-linguistic influence is made in this quote). What is interesting, the model predicts direction effects on word translation speed and it is assumed that L2 to L1 translation will be faster (the strong connection between L2 and L1 forms) than L1 to L2 which is always conceptually mediated and takes longer. Kroll and Sholl (1992) and Sholl et al. (1995) demonstrated the direction effect on RTs in translation which involved manipulating a meaning-related variable (clustering into semantic categories vs. randomized items) and obtained a facilitating effect of the semantic priming of an earlier picture naming task on subsequent L1 to L2 translation and the lack of the priming effect on L2 to L1 translation. Confirming again that L2 to L1 translation of isolated words utilizes lexical links. However, a significant number of studies presented results which are problematic for the asymmetry model pointing in this way to some deficiencies and limitations of the model.

### 2.6.3. Deficiencies and limitations of the RHM

De Groot et al. (1994) reported null-effects of translation direction on RTs or even reported the opposite effect of faster translation from L1 to L2. It is therefore possible that the conceptual memory store is activated when translation takes place irrespective of the direction (L2 to L1 or L1 to L2). Further challenges for the RHM were reported from the studies of the word type effect (Heredia 1997, Cieśllicka and Ekert 2009) on the speed of lexical processing. The processing of concrete words was consistent with the RHM whereas the processing of abstract words contradicted the model (Heredia 1997, De Groot and Keijzer 2000). Heredia (1997) responding to the RHM of the bilingual lexicon suggested that, “regardless of which language is learnt first, the more active (dominant) language determines which lexicon is accessed faster”. The asymmetrical model cannot account for the effect of word type (concrete/abstract) and word frequency on processing because it does not focus on how the processing precedes but on processing in gen-



eral (Cieślicka and Ekert 2009). Words are processed differently depending on such features as concreteness, frequency or familiarity and recency of use. Further challenges came from studies which showed lexical processing inconsistent with the RHM involving cognates (words that are similar in form across the two languages) as well as low-frequency and high-frequency words suggesting that there are other determinants which influence access to the bilingual lexicon (for a detailed review of determinants of bilingual memory see De Groot 2002).

A further challenge to the three-component model comes from the fact that the two words in translation pairs, more often than not, do not share meaning completely<sup>15</sup> (a frequent problem in translation practice see Perdek 2011) whereas both models the word-association model and the concept mediation model seem to imply that the meaning assigned to an L2 word is the meaning of the corresponding translation equivalent in L1. This observation led to focusing more on the conceptual layer of the bilingual lexicon. De Groot (1992, 2002) suggested that accounting for the cross-language non-equivalence of meaning requires to assume that the mental representations have to be perceived as being composed of “sets of more primitive meaning elements” (De Groot 2002: 48). Then the RHM can account for the non-equivalence by assuming that “the two words in a translation pair do not have to share exactly the same set of such elementary meaning elements” (*conceptual feature model* see Kroll and De Groot 1997: 187 or *distributed feature model* in De Groot 2002: 49).

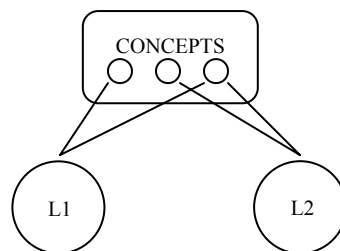


Fig. 6. The distributed feature model (adapted from De Groot 2002: 49).

<sup>15</sup> This non-equivalence of meaning across languages was interpreted in early bilingual memory research as indicative of separate (coordinate) conceptual stores for a bilingual's two languages (Weinreich 1953, see also Kolers 1963 for indications of interlingual associations).

The figure above shows the lack of overlap between all the meaning components<sup>16</sup> although the exact definition of the componential elements is not discussed by De Groot it is probably best referred to as the semantic features model (Aitchison 1996) or the perception of words as ‘bundles of meaning’ (Kusssmaul 1995) in Translation Studies literature. The major asset of the conceptual feature model is that it further complicates the RHM and it grants due attention to the conceptual layer of the bilingual mental lexicon. The common underlying conceptual base (as observed by Paradis (2007) the place where language takes meaning from) is not static and its transformation goes together with developing language proficiency. As stressed by Pavlenko (1999) it changes all the time throughout life’s experiences and differs between individuals. Exploring the area of bilinguals’ conceptual competence and adding data on bilinguals’ conceptual proficiency is therefore a needed complement to the rich data on lexical processing and representation. It is this layer in the bilingual lexicon that is of utmost importance in translation and the knowledge of how it is organized and linked to the lexical stores of L1 and L2 is essential to understand language processing in translation carried out by people at different stages of the developmental continuum of translation as a human skill.

Paradis (1997, 2009) and Pavlenko (1999), among others call for the need to distinguish between semantic and conceptual representations in the bilingual lexicon whereas the three-component model considers these two types of knowledge as belonging to the store of concepts. To quote De Groot (2002: 48), “This may turn out to be a crucial flaw of the model, although conflating them [the semantic and conceptual meaning, BW] may be the logical consequence of the facts that pinpointing the difference between semantic and conceptual knowledge is a tedious task, and that both types of knowledge that are plausible originate from one and the same source”. Although, De Groot does not specify this source. Green pointed out that “there is a need to distinguish between the semantic and the conceptual” saying that “What is envisaged is not always expressed and what is uttered does not fully determine sense” (Green 1993: 253). Pavlenko (1999, 2009) draws a clear distinction between semantic knowledge and conceptual representation. While a semantic component is char-

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<sup>16</sup> An example is the Polish word *pietruszka* (which can refer to the green leaves and the root of the vegetable as well) and English ‘parsley’ (which refers only to the green leaves), or Polish *drugie śniadanie* (literally ‘second breakfast’) and its potential out of context ‘partial’ equivalent in English: ‘brunch’.

acterized by polisemy and provides “explicitly available information which relates the word to other words [its position in the word-web as defined by Aitchison (1996), BW], idioms and conventionalized expressions in the language”, the conceptual component contains “non-linguistic multi-codal information, which includes imagery, schemas, motor programmes, and auditory, tactile and somatosensory representations, based on experiential world knowledge” (Pavlenko 1999: 212, quoted after De Groot 2002: 47-48). Paradis (2009) goes even further and distinguishes between vocabulary and lexicon. The vocabulary is a list of words and their meanings and people come to learn the form-meaning associations by seeing and hearing the words in their both languages. The word-meaning relationships are not stored in the procedural memory like the rest of one’s implicit linguistic knowledge but in the declarative memory as explicit knowledge. “The lexicon is a network of interrelated elements with their inherent morphosyntactic properties. In addition to their specific lexical semantic constraints, both the interrelationships between lexical items and their syntactic properties differ from one language to the next (and are implicit)” (Paradis 2009: 16). The lexicon is what people “acquire through use, from encountering words in different sentential contexts” (Paradis 2009: 17).

The distinction is crucial and rests on the learning versus acquisition process (discussed in section 2.2) with the consequences anchored on the fact that vocabulary being a part of explicit knowledge is subserved by the declarative memory whereas the lexicon being a part of implicit knowledge is subserved by the procedural memory. In effect, “[n]ative speakers acquire a lexicon, and with time, in school, or by sheer observation, they learn new words with their associated meanings. Second language learners usually gain knowledge of a vocabulary before they acquire a lexicon, and often explicitly learn, at least partially, the syntactic properties of (some) words. As a result, most L2 learners have at their disposal a number of sound meaning (and written word-meaning) associations but lack the competence related to (often also the conscious knowledge of) their morphosyntactic properties, which may vary from those of their native language” (Paradis 2009: 17). Consequently, the psycholinguistic experiments which provided evidence for the RHM “can only speak to the representation of individuals’ vocabulary, not their lexicon” (Paradis 2009: 18). The above reservations suggest that the structure of a monolingual and bilingual lexical representation contains more layers

(e.g., the layer of non-linguistic concepts, lexemes (forms) and lemmas which contain information about the words' grammatical behaviour). It is also quite likely that the content of separate layers may be much richer than suggested in the RHM. What is more, recent evidence from research focusing on concepts in the bilingual lexicon points to much more complex conceptual organization in the bilingual memory (Pavlenko 2009: 126) which will affect language processing in bilinguals' in spontaneous speech, creative writing and translation.

To sum up the hierarchical structure of the bilingual lexicon is undisputed as such, although as pointed out by Pavlenko (2009) the common conceptual store remains to be explored to reveal cross-linguistic differences. Among the most insightful conclusions is the fact that the bilingual lexicon is not a static formation but is developmental in nature. Depending on such factors as the language acquisition history, level of proficiency in L2 and everyday use of the L2 the strength of the connections between the three components (or stores) may vary amongst bilinguals. In other words, to quote Kroll and De Groot (1997: 170), "the architecture of the bilingual's mind may be a reflection of the level of expertise in the second language, and the context in which the second language was acquired". To account for the challenges to the RHM reporting word type effect, frequency and saliency of words in both languages De Groot (2002) suggested that the state of 'mixed representations' that is the coexistence of word-association representations as well as concept-mediation representations within one and the same multilingual mind might be possible. Numerous studies (see Kroll and De Groot 1997 for an extensive overview) including translation tasks support the *developmental shift* which takes place "in representation and processing as a function of increasing L2 proficiency" (Kroll and De Groot 1997: 176) and reliance on lexical processing is gradually replaced by conceptually mediated processing. This however does not mean that lexical links die out or disappear (Whyatt 2006b). What is more, as stressed by Gollan and Kroll (2001), a specific language experience and intensive practice, for example in translation, may lead to an increased awareness of the degree of overlap (equivalence, partial equivalence, or conceptual gaps) at the conceptual level shared by the two languages in the bilingual mind. Consequently, intensive practice in language use might lead to a re-organization of the strength of connections between the three components of the bilingual lexicon (Presas 2000, Whyatt 2006a) and will improve the process of accessing word forms and meanings in language production or

translation due to increased language control (Green 1993). To encompass all these variables De Groot (2002) admits that the bilingual lexicon can in fact have mixed connections between the three stores with some being compound and others coordinate in nature. What is more with developing L2 proficiency and growing language experience coordinate connections might become compound and compound connections might become coordinate. However, as pointed out by Kroll and Linck (2007: 239) psycholinguistic research on lexical access in the L2 studied the performance of ‘relatively skilled adult bilinguals’, “with fewer studies that specifically address the changes that occur in language processing as L2 skill develops”. What remains fairly undisputed is that although the activation of L1 decreases with growing proficiency in the L2, growing skill in the L2 “does not correspond to a switching off of the L1” (Kroll and Linck 2007: 246-247), hence the need for an efficient language control mechanism (see section 2.5) in lexical access both in L2 or L1 production and in translation. Ivanova (1998: 96), for example observed that, “translation requires deeper-level processing which is beneficial to increasing the fluency of lexical retrieval” (see also Kroll 1993).

#### 2.6.4. Bilingual memory and translation

Psycholinguists are not unanimous on whether lexical access is language selective (the language is specified prior to retrieving a word from memory), for example the RHM (Kroll and Stewart 1994, Gollan and Kroll 2001) or nonselective (bilingual lexicon does not have two separate functionally independent lexical representations but one integrated lexical store) like in the Bilingual Interactive Activation model (Dijkstra and Van Heuven 2002). Undoubtedly, bilingual lexical access (see Levelt 2001 for a detailed analysis of the lexical access process, and Costa and Santesteban 2004 on lexical access in bilingual speech production) is of primary importance in translation tasks in which one constantly reaches into language specific lexical stores of the bilingual lexicon to find a needed lexical item in the target language. Accessing a desired word in translation is dictated not only by the meaning relationships at the conceptual level but also by the language specific contextual requirements and formal (i.e., grammatical) constraints. Interpreting meaning incorporates not only access to concepts but also the frequently subtle knowledge of word combinations and syntactic patterns (Lewandowska-Tomaszczyk 1990, 2004).

In this respect the research on bilingual memory in the form of the RHM does not provide all the subtle data included in lexical access in translation practice which is always contextualized and positioned in a specific socio-pragmatic situation dictating specific requirements. As observed by De Groot (1997: 42) the availability of context is likely to alter the prediction of the RHM on the concreteness effect in lexical access with no difference between accessing concrete and abstract words. On the other hand, being able to pick up contextual clues especially at the macro level and use them in lexical access during the translation process is a cognitive skill which develops with translation experience (to be discussed in chapter three). Initially, it seems that untrained natural translators' performance exhibits the tendency for word-to-word (horizontal) translating along lexical links (Krings 1986a, Lörcher 1991). Vertical translating (including conceptual meaning analysis) has been ascribed to more experienced translators (De Groot 1997, Seguinot 1997).

The dynamic interactive nature of bilingual memory and bilingual knowledge points to the constant need to inhibit undesired competing lexical items both cross-linguistically and within one language. What is more, recent psycholinguistic studies (e.g., Thierry and Wu 2007) using neurolinguistic methods (brain potentials) reveal 'unconscious translation' during foreign language text comprehension which confirms the simultaneous activation of both languages not only during language production (Marian and Spivey 2003). This cross-linguistic simultaneous activation is useful in translation<sup>17</sup>. In TS Think Aloud Protocol studies provided a lot of evidence for the competition among TL potential candidates that is lexical items which are made available to the translator (e.g., activated in his/her bilingual memory) who then has to select (decide on) the best match for the target language text. This tedious process of assessing potential equivalents, rejecting the misfits and selecting the most appropriate one in terms of not only meaning but contextual appropriateness may sig-

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<sup>17</sup> Paradis et al. (1982) reported on an intriguing case of cross-linguistic activation in bilingual aphasics who when recovering were able to translate from one of their languages into the other but they were at the same time unable to use the other language for spontaneous speech production. The authors termed this phenomenon paradoxical translation and concluded that translation is a cognitive task dissociable from understanding and speaking two languages. Another viable explanation is that when translating the patients used their metalinguistic knowledge and translated words using lexical links (see De Groot and Christoffels 2006: 190).

nificantly contribute to high energy expenditure in translation tasks. As reminded by Green (1986, 1993) the cost of language control and constant switching between languages in terms of cognitive resources, which are in limited supply, is not to be underestimated and has to have a share reserved in mental effort management during the translation process. On the other hand, the close interaction of the two languages in the bilingual memory is likely to facilitate the translation process by spreading activation, providing that both lexical stores and the common underlying conceptual base have rich inventories of lexical items and mental representations. It is to be expected that through translation practice the bilingual mental lexicon will grow not only in terms of items which are available but also in terms of the changing strength of the connections between lexical forms and conceptual representations. Paradis (2009) even suggested that experienced conference interpreters throughout their working life collect many cross-linguistic equivalents which can be quickly recalled from memory and facilitate the translation process. Yet, his suggestion that experienced interpreters use only lexical links without conceptual processing seems questionable as it implies that it is possible to translate without interpreting the meaning (conceptual content of the SL utterance) relying only on the metalinguistic lexical associations. It seems more plausible to expect that both lexical and conceptual processing complement each other especially in familiar situations and contexts.

This brings the issue of the place of bilingual knowledge seen as a part of general knowledge structures. The relationship between language and knowledge in the bilingual mind has already been signalled by the three store hypothesis and the postulate of the common underlying conceptual base which both L1 and L2 share. Yet, many questions need to be asked about the impact of translation experience on both lexical availability and conceptual proficiency of the translator at various stages of the developmental continuum discussed in chapter one. Fast and fluent lexical access is very much desired in the translation process (see Bell 1991) and the need is even more urging in interpreting practice. Gile (2009: 227) put forward his Gravitational Model of lexical availability in interpreting which draws on the frequency of use and recency effects reported in lexical access research (Prat et al 2007). Bell (1991) described his concept of the frequent lexis store and the lexical search mechanism relying also on the frequency and recency effects for lexical access. Although these proposals are derived from the authors' extensive experience as scholars and

practitioners they nevertheless await empirical validation. Finally there is a question of the effect of translation experience on the structure and organization of the bilingual memory. In this scenario a translator at any stage of translation skill development is a constant language learner and in his or her work new vocabulary items are encountered on an everyday basis. Translating them requires careful measurement of the degree of conceptual overlap between an SL lexical item and its potential semantic equivalent chosen for the TL text. Perfect matches occur especially in concrete words (e.g., English ‘apple’ for Polish *jablko*) but are in the minority as compared with those which are considered approximate equivalents (e.g., ‘a glass’ for *szklanka*). Abstract words are definitely more problematic as their meaning is largely influenced by the culture of the respective languages (see Wierzbicka 1991 on her account of the Polish word  *tęsknota* and the English partial equivalent ‘longing’). Needless to say the problems with lexical access will increase with non-literal figurative expressions as for example in ‘You are the apple of my eye’, which when translated into Polish will most likely mean, *Jesteś moim oczkiem w głowie*. In this example as well as in metaphors, and especially conceptual metaphors, the need for conceptual proficiency becomes of the utmost importance.

Most practitioners would agree that translation practice is a good source of language experience when it comes to subtle data on words and their meanings. It is not surprising that translation tasks may raise an L2 learner’s awareness of the complex nature of meaning. What on the surface might seem to be a pair of translation equivalents turns out to share only some aspects of meaning (Whyatt 2006b). For example, for a beginning Polish learner of English the Polish word *seler* and English word ‘celery’ are a perfect pair of translation equivalents which share the same concept (the vegetable called ‘celery’). Yet, using both terms as translation equivalents would lead to a conceptual misunderstanding as the Polish word *seler* refers to the root of the vegetable which is the most frequently used part in Polish cuisine, whereas the English word ‘celery’ refers to the stems (or sticks) which in Polish are referred to as *seler naciowy* and still remain a novelty in Polish kitchens. The English equivalent of the Polish ‘seler’ is the word ‘celeriac’ which is rarely used as the root part of the vegetable is not a part of the standard British diet (Whyatt 2007b). Experiencing these intricate asymmetries in which meaning is mapped on lexical items in both languages of a bilingual person is fre-



quently a by-product of the translation experience. Yet, it is frequently observed that in L2 teaching verbal fluency is valued higher than conceptual proficiency in L2 use. It is probably not an overstatement to say that one can be fluent and come across as a proficient L2 learner and user but at the same time be very much unaware of confusing concepts which are behind the L2 words. Danesi (1992) pointed to the fact that some L2 learners may adhere to the rules of L2 grammar, show high verbal fluency and come across as well organized communicators, but their discourse will lack the conceptual appropriateness exhibited by native speakers of L2. Therefore, verbal fluency does not have to reflect the learner's conceptual proficiency. This can be possibly reflected in L2 learners' weak ability to understand and interpret implicit meanings in L2 as well as figurative expressions (Cieślicka 2004 demonstrated it in advanced Polish learners of English) and metaphors (Danesi 2003)<sup>18</sup>, as well as in interpreting humour and irony (Bromborek-Dyzman et al. 2010). As it is precisely in these non-literal manifestations of language use that native speakers treat linguistic means as a kind of prop for the complex "dynamic on-line, constructions of meaning that go far beyond anything explicitly provided by the lexical and grammatical forms" (Fauconnier 1998: 251). Pavlenko (2005) noted that conceptual proficiency is problematic even for advanced L2 users. Paradis (2009) noted that immersion students, for example are notorious for fluency over accuracy. Kroll and Linck (2007) reported on a study by Tokowicz et al. (2004) in which native English students of Spanish as their L2 who spent some time in Spain made more errors in spoken word translation giving any semantically related word if they could not produce a target translation. Students who did not study Spanish abroad either produced the exact translation equivalent or said, 'I don't know' valuing accuracy over fluency.

Raising awareness of the intricate connections in the bilingual mental lexicon is an essential part of developing as a translator. Toury (1995) pointed out that it is the ability to establish similarities and differences between the two languages (what he termed *interlingualism*) that is an essential part of translation proficiency development. Yet, neither the term *interlingualism* nor the process of becoming an interlingual individual (Whyatt 2009c) in the process of developing translation expertise has at-

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<sup>18</sup> see Harden (2009) on translating conceptual metaphors and Pisarska (2004) on linguistic aspects of metaphor translation.

tracted much attention. Presas (2000) remains one of few scholars who discussed the possible transformation in the functional reorganization of bilingual knowledge as a consequence of developing translation competence (see also Whyatt 2006b).

The discussion of the bilingual foundations of translation ability would be incomplete without relating the emerging complex picture of bilingual knowledge to the L2 learner's/user's general cognitive structures. This might demonstrate some important prerequisites vital for the development of translation skill in its evolutionary continuity.

## 2.7. Cognitive effects of bilingualism

The amount of literature on the cognitive consequences of bilingualism is impressive (see Bialystok 2005 for a review) and it has documented accounts from a detrimental effect of bilingualism to a beneficial influence of learning another language on the learner's general cognitive abilities. Gollan et al (2005) showed that since bilinguals use two languages they use each of their languages less than monolingual speakers and in consequence might have smaller vocabularies in each of their two languages than the monolingual speakers of L1 and L2 (notice the monolingual view of bilingualism). Bilinguals were reported to show the effects of cross-language competition in the frequently experienced tip-of-the tongue phenomenon than monolinguals (Gollan and Acenas 2004). Today's view of bilingualism is that of an enriching intellectual experience. Wittgenstein said, 'the limits of my language mean the limits of my world'<sup>19</sup>. Whorf (1956), the father of linguistic relativity and himself "an avid language learner" (Pavlenko 2005: 436) indicated in his writings that learning another language "has the power of transforming or enhancing the speaker's worldview" (Pavlenko 2005: 436). As pointed out by Rosi Landi (1973: 33), whoever learns a new language becomes a new person. Among the most frequently mentioned benefits, there is enhanced metalinguistic awareness (Bialystok 2001) which makes language learners more sensitive to their L1. As noted by Kesckes and Papp (2000), language students frequently observe that the best way to understand one's own language is to learn another language.

Research into the developmental aspects of bilingualism (Clark 1978: 36) points to the fact that being exposed to two or more linguistic systems

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<sup>19</sup> Ludwig Wittgenstein, *Tractatus Logico-Philosophicus* (1922).

can make the structural patterns of language more noticeable and encourage attention to the systematic features of language. As a result bilinguals show increased metalinguistic awareness and ability (Tunmer and Myhill 1984). Metalinguistic knowledge following Bialystok (2001) can be defined as a more technical knowledge of the language. Although the actual role of the learner's metalinguistic abilities in L2 appropriation has not been extensively studied, Roehr (2008) found a positive correlation between L2 proficiency and metalinguistic knowledge. As reported by numerous studies bilinguals are at an advantage over monolinguals when it comes to metalinguistic awareness by the virtue of being exposed to two linguistic systems. The metalinguistic knowledge, awareness and ability (three constructs mentioned by Bialystok 2001) is not linked to one language but it is transferable in nature. In other words if somebody is a naturally good reflective communicator both in speech and writing in one's native language and is able to use language as a tool, appropriately and up to the point, fluent and accurate in expressing ideas in compliance with the pragmatic code of language behaviour, all these skills will become transferred to the L2 use once the linguistic level of L2 proficiency is achieved. As adhered by Paradis (2004/2009) and discussed in section 2.2 the role of metalinguistic knowledge in L2 use by those who acquire a second language through formal instruction and later on in life as adults is frequently the primary source of knowledge about the L2 system. L2 users then will resort to their metalinguistic knowledge when they experience gaps in their L2 linguistic competence. Consequently, it is possible that the need to establish similarities and differences between the learner's two languages is a constant psycholinguistic process which accompanies second language acquisition no matter whether it is carried out in a natural bilingual family setting or in an L2 language classroom. This process in the bilingual mind probably is more subconscious in natural bilingualism than in acquired bilingualism, more subconscious if teaching an L2 begins early in one's childhood and more conscious in adult L2 learners. If the teaching methods are communicative rather than relying on explicit instruction, the level of an L2 learner's metalinguistic knowledge will differ. It will be different in language course participants who learn a foreign language for practical communicative reasons and in EFL students at university level who study the language to become teachers or translators. Both these professions necessitate high levels of metalinguistic knowledge. Although the role of metalinguistic knowledge has not received much attention in Translation Studies, it remains undisputed that metalinguistic awareness and ability

are part and parcel of a translator's expertise where language is used as a tool, and the use of language is reflected upon and judged as adequate, appropriate, natural, inappropriate, inadequate, or unacceptable. As suggested by Malakoff and Hakuta (1991) it is possible that metalinguistic knowledge and the ability to use it in translation is one of the factors which distinguish natural translators from professional translators. I shall return to these issues in more detail in chapter 3.

Other positive effects of bilingualism include better performance on tasks which require the suppression of irrelevant information and executive control (Bialystok 2001). Recent findings on the cognitive effects of bilingualism point to interesting and promising results. Bialystok et al. (2004) noted that elderly bilinguals did much better than elderly monolinguals on cognitive tasks which require the inhibition of irrelevant information. Kroll and Linck (2007) attributed the age defying effect of bilingualism to the constant exercise in the suppression of irrelevant lexical items. To quote, "If one language must be inhibited to use the other, then bilinguals potentially develop expertise in inhibitory control that then extends beyond linguistic tasks to domain general cognitive performance" (Kroll and Linck 2007: 262). Recent neurolinguistic studies showed that the mechanism responsible for language control is the same as for the control of action in general (De Groot and Christoffels 2006). Price et al. (1999) used the predictions of Green's inhibitory control model (1986, 1993) and demonstrated that subjects who were asked to translate words from German into English showed activation in the area of the brain (recorded in Magnetic Resonance Imaging – MRI) responsible for the control of action. This enhanced and well trained skill of attention control (see Gopher 1992) in bilinguals is indispensable in translation which involves multitasking in the conditions where both languages are activated and while decisions on lexical selection have to be made fairly quickly (or very quickly in simultaneous interpreting). Gile (1995/2009) proposed the efforts model pointing out that apart from comprehension and production effort, there is memory effort and co-ordination effort which supervises the division of labour in the translating mind. I shall return to these issues in chapter 5.

Further cognitive consequences of bilingualism include factors involved in creative processes (Appel and Muysken 1996) which are essential for refining the skill of translation to reach the level of expertise (Kusmaul 1991). Nida (1981, 2001) saw creative thinking as an essential part of translators' cognitive make-up. Research into the cognitive effects

of bilingualism shows that the essential features of creative processes are stimulated by acquiring another language. Bilinguals are considered to be cognitively more flexible, better at lateral thinking and more efficient in making remote associations as well as having “greater skill in handling the linguistic code” (Presas 2000: 27) due to their metalinguistic awareness. This view is consistent with Lambert’s (1978) opinion expressed over thirty years ago in the following words: “It may be that their [the translators’ BW] bilinguality, a prerequisite for membership in the profession, has the effect of providing them with special forms of intelligence, sensitivity, and skills at finding out what is meant and what is implied” (Lambert 1978: 132). This suggests another important cognitive consequence of becoming bilingual that is the constant need to negotiate relationships and connections between a bilingual’s two languages and the general knowledge store. Both the process of learning an L2 and the early translation experience show that this relationship is in fact very complex.

The general question which still remains to be addressed is the relationship between language and knowledge, or in a bilingual context, between knowledge and the two languages of a bilingual person. Wilss (1996) pointed out that the role of language in general education is probably still underestimated. What remains undisputable is the fact that once we acquire language it is through language that we acquire knowledge of various areas and subjects. At schools knowledge is imparted through language, acquired and tested through language during tests and exams. According to the principle of functional encoding (see Beatens Beardsmore 1982) the knowledge acquired or learned in one language will be more readily available in the language in which it was acquired than in the other language in which the bilingual person might simply lack words to express it (cf. Grosjean’s *Complementarity Principle* 2002 discussed in section 2.3.1), or access to the specific vocabulary might be delayed due to the recency effect according to which words used less frequently take longer to retrieve in the lexical access process.

Kolers (1973) conducted an experiment in which he wanted to measure brain function during the translation process. His subjects learned to recite their alphabet backwards in one language but they failed to be able to do the same with similar fluency in their other language. Although the subjects whose two languages share the same script (the same letters in the alphabet), German and French speakers with English as their second language were better at reciting the alphabet backwards in English than

the native speakers of Arabic and Korean. This shows that the skill learned in one language will not necessarily be equally accessible in the other language. Knowledge acquired in one language, e.g., mathematical skills will be more readily available in the language in which it was acquired. Korzeniowska (1998) points that even at a very high level of bilingualism people usually prefer to count in one language rather than the other. For this reason Cummins (1991) points to the need to differentiate between language proficiency and academic proficiency as determinants of educational success. Cummins (1991) suggested that a distinction should be made between global language proficiency and academic proficiency. Deriving his observation from a bilingual education context he concluded that the educational success of a bilingual learner does not depend on the Basic Interpersonal Communicative Skills (BICS) which take about 2 years to acquire, but it is more dependent on Cognitive Academic Language Proficiency (CALP) which takes 5-7 years to acquire. His observation is valid for the present discussion in the light of literacy related knowledge. It is also significant in the perception of translation as a knowledge-based activity (Wilss 1996) in which bilingual knowledge is a vital but not the only kind of knowledge applied. These processing difficulties referring to language imbalance and asymmetrical connections between the lexical stores of the two languages and the general knowledge store (CUCB) will have to be negotiated in developing translators and handled in expert translators. I shall discuss my proposal of how it might be achieved in chapter 5 by proposing a Knowledge Integration Network (KIN) according to which the process of developing translation expertise is a process of learning to integrate knowledge (language knowledge and general knowledge).

## 2.8. Conclusions

The purpose of chapter two was to discuss the bilingual foundations on which translation expertise can be built. Translation Studies have taken for granted that potential translators have mastered their two languages to native-like standards remaining quite unaware of the complex body of knowledge and skills involved in the process. It is fundamental in this work that both terms 'a bilingual' (defined in a broad sense (see Kroll and Linck (2007: 238) referring to all individuals who can use more than one language for communication) and a 'translator' should be perceived as devel-

opmental constructs and not as constant stable entities. The failure to accept that both bilinguals and translators are constantly subject to developmental changes in the level of their L2 proficiency and generally in terms of their bilingual knowledge is possibly the root of misunderstandings about bilingualism (Grosjean 2002) and translation as a skill socially expected of bilinguals (Beatens Beardsmore 1982). Although nowadays the majority of the world's population is bilingual or multilingual (Li Wei 2000) the need for translation services is still continuing to grow.

The nature of language in general as a sophisticated and intricate system of communication assigned to a particular language community shows that one is dealing with an overwhelming amount of knowledge and skill. Language as knowledge can be easily defined as a rule governed code in which words can be combined in sentences which can carry meaning. Language as social practice (Sfard 1998), however is much more difficult to define and its rules are in fact reliant on subtle data that all users of the same language come to share and understand by interacting with one another in society. The complexity of language becomes apparent when one comes to acquire or learn another language. In natural bilinguals two linguistic systems develop simultaneously and are used in a complementary manner in response to the current communicative needs or situations which require the use of one or the other language. For obvious reasons nobody can speak two languages at the same time. In consequence, natural bilinguals are not, as it is still commonly expected equally proficient in their two languages (Grosjean's Complementarity Principle 2002). If they were they would potentially make the best translators. As it is, in their bilingual knowledge they probably have excellent conceptual proficiency but might lack lexical items especially in areas outside their customary language use.

When a foreign language is learned after the native language has been, at least partially acquired, it is initially learned as a set of knowledge, an alternative code for communication. When two languages start to live in one mind, they constantly compete for dominance. L2 learners and users experience interference at all levels of language, i.e., when lacking competence in some areas (grammar, lexicon, discourse patterns) they may transfer their L1 knowledge and do the best they can to communicate their intended meanings. As suggested by Cook (1992) they develop multicompetence. Their bilingual memory starts to store native and foreign words for the same concepts. When speaking in their L2 learners initially translate their L1 words into their L2 translation equivalents. In comprehension they

frequently have to first translate what they hear into their L1 words and only then they can understand what is being communicated. With growing proficiency the processes of comprehension and production gain speed and the lexical links are used less while the conceptual connections become established and bring visible benefits for the speed of L2 processing. The L2 learners get better at inhibiting their L1 when speaking in their L2 that is they get better at language control (Green 1986, 1993) and their L2 performance becomes somehow speeded-up or automatized to the point that they are even able to monitor their performance and spot and repair transfer errors. Yet, they are still frequently unable to match native language performance especially in terms of conceptual proficiency. Even if they sound fluent they frequently lack the L2 conceptual competence, they make word usage errors, or sound too formal or too informal in a particular situation. Even if they have acquired an extensive knowledge of the L2, they still falter when it comes to L2 as social practice and their language behaviour might be perceived as odd by native L2 users (e.g., Polish L2 users are frequently perceived as impolite failing to respect the English concept of privacy). What is more, recent studies into L2 users' L1 reveal the impact of L2 on the use of L1 (Poulisse and Bongaerts 1994, Cook 2003). Ewert (2009) investigated the impact of learning a second language on the knowledge of one's native language and concluded that, "there is a qualitative change in L1 knowledge with increased L2 proficiency and length of exposure to the L2" (Ewert 2009: 147). As a result the L1 of an L2 user is not the same as the L1 of a monolingual native speaker.

Bilingual knowledge, however, is not a sum of knowledge ascribed to L1 and L2 monolinguals at all levels, linguistic and conceptual. A bilingual person is a unique individual who can speak and understand either of his/her language, who experiences language interference, can switch from one language to the other or mix and blend them in one sentence as well as use the two languages to translate between them. The fact that all bilinguals experience interference shows that it is impossible to switch off one of the two languages which, if not kept under control, will show up in article misuse or in an unintended lexical or conceptual transfer error. Translation as an activity requiring the use of two languages is likely to reveal a lot of information about the relationship between the two languages of a bilingual individual. As chapter 3 will demonstrate when translation is performed by untrained natural translators it shows all the weak aspects of one's bilingual knowledge. By the need to activate both



language systems held together by the common underlying conceptual base, translation might create favourable circumstances for cross-linguistic interference at all levels. Can untrained translators exercise sufficient cognitive control to keep the two languages safely apart and avoid interference? Is the frequently low conceptual proficiency of L2 learners visible in their translation performance? Is translation really the fifth skill of all bilinguals? Do we need to train translators or is natural translation ability sufficient for effective intercultural communication? These and other related questions will be dealt with in chapter three which aims to discuss how the human skill to translate is manifested as an untrained ability of bilinguals acting as natural translators.



## Chapter 3

*... contrary to popular opinion, translation has little to do with fluency, and bilinguals range from being very poor to being very competent translators.*

*Grosjean (1982: 257)*

### **Translation as an untrained ability**

The purpose of this chapter is to discuss the initial stages in translation skill development when translation is performed as an untrained ability by people who can communicate in their two languages. Maria González Davies (2004) in her book entitled, *Multiple Voices in the Translation Classroom*, described this stage as *unconscious incompetence* in the sense that those who perform translation are unaware of the intricacies involved in the process (González Davies 2004: 40). In today's multilingual communities translation is an everyday occurrence and the ability to translate is socially expected of bilinguals. Translation then is the fifth skill apart from the four skills of speaking, understanding, listening and writing in the two languages of a bilingual person. As suggested in chapter one people are predisposed to communicate with others and this predisposition includes communicating via translation. The chapter will focus on two groups of translators who most frequently demonstrate their untrained ability to translate, natural translators and L2 learners. Discussing how the human ability to translate is manifested by those users of L1 and L2 who translate without any prior training for it will demonstrate the use of bilingual knowledge for interlingual communication. It will also prepare the ground for discussing the further development of translation as a trained skill expected of professional practicing translators (chapter 4).

#### 3.1. Dispute over bilingual knowledge and translation capacity

In 1978 Harris and Sherwood published an article entitled "Translation as an innate skill". The article reported on case histories of bilingual children (see Harris 1980 on "How a three-year-old translates") who without any training or instruction were performing the so called 'natural translation'.

Natural translation understood as, “the translating done in everyday circumstances by people who have had no special training for it” (quoted after Toury 1995: 241) led to a hypothesis that “the basic ability to translate is an innate verbal skill” (Harris and Sherwood 1978: 155). The developmental stages in the unfolding of translational behaviour in naturally bilingual children were suggested by Harris and Sherwood (1978: 155) as follows:

- 1) Pre-translation characterized by an occurrence of single word labels from the two languages naturally spoken in the home environment of the child accompanied by a conceptual bridge, a non-verbal entity (compound bilingual memory model). The characteristic features reported by Harris involved “the unconsciousness of the whole process and the small scale and low rank” (single words, after Toury 1995: 243), and the fact that it was considered functionally redundant.
- 2) Autotranslation characterized by spontaneous functionally redundant “translating of what one has just said in one language into another” and directed either to oneself (intrapersonal autotranslation) or to others (interpersonal autotranslation)
- 3) Transduction that is socially functional translation where “the translator acts as an intermediary between two other people” either within the family or outside the family (Harris and Sherwood 1978: 165).

The above successive stages of the tentative model were claimed by Harris to be universal and taken as evidence that translation can indeed be regarded as, “humanly innate” resulting in a “specialized predisposition in children” (Harris and Sherwood 1978: 168).

The claims made by Harris (1977) and Harris and Sherwood (1978) together with the statement that natural translation should be a primary source of data for “the scientific study of translating” instigated a heated debate about the nature versus nurture factors in the skill of translation between Harris and translation scholars within a newly established discipline of Translation Studies (Kring 1992, Harris 1992). Toury (1995) in his seminal book, *Descriptive Translation Studies and Beyond*, said, “To be sure, the Harris-Sherwood model was not devised as an overall account of the emergence and development of translating as a human skill. Rather it was confined, right from the start, to very young natural transla-

tors. Even within those limits the adequacy of the model seems questionable” (Toury 1995: 244).

The major criticism which followed included little concern for the circumstances under which the transition from one phase to another occurred, concentrating on one single variable, that of age and equating biological age with bilingual age in order to conclude that “translating is coextensive with bilingualism” (Harris and Sherwood 1978: 155) and proceeds from spontaneous and functionally redundant translating (see also Albert and Obler 1978: 218) to socially functional translating. Other translation scholars such as Lörcher (1986), Wilss (1982) and Krings (1992) expressed their concerns that translating as a skill allowing for fluent translation cannot be conceived as given by the mere fact of being bilingual. To quote, “the identification of translating as a skill with mere bilingualism seems an unwarranted oversimplification. After all, there is no answer in it to the crucial question of what it is that brings forth the unfolding of the skill (that is, its realization in actual behaviour) and the way (or ways?) it then develops” (Toury 1995: 245-246). Harris received severe criticism but the concept of natural translation entered the debate about the genesis and evolution of translation as a human skill, and as expressed by De Groot (1997) remains valid as what comes as natural does not need to be trained.

### 3.2. Translation as a natural ability of bilinguals

According to Harris and Sherwood (1978), “all children can translate in all cultures, in all languages and registers, throughout history and from the time the individual starts to acquire a second language” (cf. Malakoff and Hakuta 1991: 144). In this respect natural translation is not a “learned skill, such as learning a foreign language in school, but, rather, it is a skill which is developed from a natural and existing base, similar to the development that occurs in mother-tongue language abilities” (ibid.). As pointed out in chapter 1 the word ability and skill are used as synonyms. Consistently, as any natural ability it should be open to improvement under appropriate guidance, although Harris (1977, 1980) does not elaborate on the issue of further development in natural translation ability. Similar scant attention is paid to individual differences among natural translators. The possibility that natural translation is perhaps an intriguing game for developing bilingual minds or a just a communicative strategy dictated by the circumstances is not considered, yet by all means plausible (Malakoff 1992).

### 3.2.1. Studies in natural translation

As pointed out by Malakoff and Hakuta (1991), “For many bilingual children throughout the world, translation is an everyday activity, a part of their lives as bilinguals (Grosjean 1982). Yet translation is a poorly understood phenomenon” (Malakoff and Hakuta 1991: 142) and there is very little empirical literature on translation as a natural ability of bilinguals, especially of bilingual children. The evidence that is available either comes from “anecdotal” reports by linguists (Leopold 1939-1949), or indirectly from studies which used translation as a research technique (Harley 1986, Swain, Naiman and Dumas 1974, Kroll and Stewart 1994, De Groot 2002) without focusing on the actual translation ability. Some of the reasons for lack of interest in natural translation abilities were discussed in chapter 1. Malakoff and Hakuta (1991: 144) quote a number of studies (e.g., Shannon 1987) which reported on young children acting as natural translators supporting in this way the existence of natural translation ability put forward by Harris (1977).

Malakoff and Hakuta (1991) tested Harris’s (1977, 1980) claim of natural translation (not to be confused with professional translation) as a skill. The authors presented two studies of translation ability which provided “empirical support that late elementary-school students are able to produce good written and oral translations”. The study investigated Puerto Rican Children in New Haven, Connecticut with respect to their translation abilities. The subjects were divided in two groups for study 1 on properties of translation ability and Study 2 on distribution of translation ability. The first study investigated 16 subjects (8 girls and 8 boys fourth- and fifth-grade, mean age 10.7 years) who apart from being bilingual were also reported to have had some experience in translating for their family or peers. The second study investigated a randomly selected group of subjects (27 girls and 25 boys) from fourth- and fifth-grade bilingual education classes. Prior to the experiment the language proficiency of the subjects in both languages was assessed by the Woodcock Language Proficiency Battery and an online analogies task was created and administered in each language. Translation tasks for the first study included word, sentence and story translations in both directions from Spanish to English and from English to Spanish. Sentences and stories were constructed to minimize vocabulary complexity and to “provide ample opportunities for grammatical pitfalls that would cause (intrusion errors, i.e., errors in which the source-language structure intrudes into the translation)” (Malakoff and Hakuta 1991: 153). The word and sen-

tence translations were done orally as an on-line task with the stimuli for translation appearing on a computer screen. A subject was asked to read the source material and provide the translation which was tape-recorded to enable assessment of the accuracy of the translation. Sentence translation was carried out in a similar on-line fashion but an additional element was manipulated. Some sentences were administered in a straight and some in an 'imagery' condition where a sentence would appear on the screen first followed by a "thought balloon" and an instruction for the subject "to make a mental picture of the sentence". The imagery condition was meant to defy literal translation by expanding the "window space" for translation, whereby the meaning of the sentence would be processed to a greater extent and grammatical pitfalls through literal translation would be avoided (Malakoff and Hakuta 1991: 154). The story translation was done in writing. In addition a word identification task was included as an attempt to 'assess translation proficiency'. The subjects in study 2 were asked to translate in the written format the same story which was translated by the subjects in Study 1. The translations by both groups of subjects were coded and compared in a detailed error analysis.

The results obtained in study 1 allowed for the following conclusions:

- 1) The subjects were extremely good translators and made few errors in both source-target directions (however, morphological errors were ignored as in the authors' opinion they did not affect major meanings of the translations)
- 2) The imagery manipulation did not have an effect on whether literal or non-literal translations were made (a vast majority included literal translations irrespective of the direction. Malakoff and Hakuta (1991) noticed that the lack of effect may be due to the "ineffectiveness of the imagery manipulation" which proved tedious and tiring for the subjects who had to "form images continually across a large number of sentences" (Malakoff and Hakuta 1991: 155).
- 3) Translation was more efficient into English than into Spanish (so reflecting English language dominance)
- 4) For word translation the speed is predicted by proficiency in the target language rather than in the source language, although the pattern was

less clear for sentence translations. The authors concluded that possibly SL proficiency plays “a greater role as the unit of language that needs to be processed gets larger” (Malakoff and Hakuta 1991: 156).

The general conclusion of the study was that in addition to proficiency in the two languages, “there appears to be a translation proficiency” predicting translation speed in terms of accessibility of the two lexicons measured by the word-identification task. This conclusion led to a proposal that translation skill apart from proficiency in two languages requires “an additional component of accessibility of the two lexicons” (Malakoff and Hakuta 1991: 156).

The results obtained in study 2 showed that the error patterns revealed similarities between both groups. The less selected group in terms of translation experience made fewer errors when translating from English into Spanish. Malakoff and Hakuta (1991) explain this surprising result saying that all Study 2 subjects were in bilingual education programmes where both languages are used as the language of instruction. Study 1 subjects were not in the bilingual education programme at the time of the experiment, although all but one subject were in a bilingual education programme “at some point” and because of the subtractive<sup>1</sup> nature of their bilingualism in the community they “reach a plateau in their Spanish proficiency” (Malakoff and Hakuta 1991: 161). This in turn might have contributed to the fact that the subjects in the more selected group were not significantly better in their translation ability. Generally the study showed that, translation skill is present in bilingual children. As the authors concluded, “Bilingual children are able to translate, albeit with flaws, and their translations reflect their understanding of the communicative importance of translation”. Making reference to the discussion of the bilingual foundations of translation skill, it is possible to say that natural translators focus on the conceptual level and the structural level (lexico-grammatical) may be compromised. In a functional sense though natural translation serves the communicative goal and bilinguals are able to perform communicatively adequate translations if one accepts the view that it is possible “to communicate meaning in the absence of correct sentence struc-

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<sup>1</sup> Depending on the social status of a bilingual’s two languages bilingualism has been defined as additive (adding prestige, i.e. in the case of English for learners of English in Poland), or subtractive (perceived as minor and looked down upon, i.e. Polish for Polish immigrants in the USA in the early 20<sup>th</sup> century).



ture” (Malakoff and Hakuta 1991: 143). Unfortunately, it is unclear if the subjects in the study were natural bilinguals (born in a bilingual family) or whether they came to acquire English as their second language outside their monolingual family. The latter case is more likely judging by the range of errors reported in the study. The lack of clearly defined language acquisition history does not undermine the obtained results and the study demonstrated decisively that bilingual children (whether natural or L2 learners) are able to translate, that is, produce communicatively adequate translations. To quote,

In natural translation, linguistic sophistication and explicit knowledge of contrastive linguistics is generally not the norm, especially among grade school children. Although children of this age can speak two (or more) languages correctly, they do not have a conscious awareness of the specific differences between language systems. Despite the absence of such linguistic knowledge, children are able to communicate meaning; although the meaning may be embedded in poor sentence structure (Malakoff and Hakuta 1991: 150).

In professional translation such an approach is perceived as highly unprofessional. A translator is more likely to miss the intention of the SL text author than form an unacceptable sentence structure. Translation especially written as a purposeful communicative activity is about the transfer of meaning from a SL text into a TL text but in the form that is acceptable and appropriate for the TL users (i.e., “in the natural form of receptor language” (Larson 1984: 17)).

This points to the structural difference between natural translation and professional translation although both kinds of translation respond to communicative needs and help to overcome language barriers. It cannot be left unacknowledged that most natural translation is done orally in every day communicative situations (cf. community interpreting) where the extralinguistic factors such as the contextual setting, the communicative purpose and the participants provide strong support for the production and interpretation of utterances. Natural translation is done for in-house use and its quality is not an issue to be discussed or analyzed. One might say that the form becomes secondary and the actual words and structures serve only as a kind of prop for the online construction of meaning which relies heavily on the context and the backstage cognition of the participants (see Fauconnier 1998) as well as on the cooperative

principle and the maxims of communicative behaviour (Grice 1975, Gutt 1991, Sperber and Wilson 1986). The actual form may be grammatically deficient and left as such which points to the lack of metalinguistic monitor to ensure correctness. This however, is something the participants of such interactions are prepared to ignore as we all sometimes ignore slips of the tongue, vagueness and the poor sentence structure of our interlocutors as long as the rich pragmatic context allows us to fish out their communicative intentions. Natural translations are usually performed in more informal, more private contexts where the forms which carry meaning are not a priority, where there is a high tolerance of linguistic inadequacies and transfer errors. In public official situations (e.g., political visits, courtroom hearings or business negotiations) the context requires a high level of formality, flawless unambiguous translation in terms of content and form. These requirements cannot be met by natural translators as they are not within the reach of the untrained ability to translate. Such requirements call for professional translation services.

Gómez (2006) tested Harris's (1977) tenet that translation is a natural skill in bilinguals looking at written translation. The subjects were natural bilinguals (born to bilingual parents) and advanced native Spanish students of English taking their last semester of a translation programme. All the subjects were aged between 18 and 25 (average 22.5). Both groups were involved in English to Spanish translation and vice versa. The results obtained in the study showed that natural bilinguals took longer when translating in both directions and they used more printed sources, whereas translation students used only the Internet. No bilinguals and only 50% of the translation students read the SL text prior to translating it into Spanish. About 50% of each group revised the text after they had finished translating it. However, the differences were not significant when translating into English. Bilinguals made more pauses and corrected their translations more frequently. They used twice as many full words (the authors are not clear what they mean by full words but presumably it means content words) when translating into English and three times as many full words when translating into Spanish than the translation students. In the translation quality assessment which followed all the translations were graded by 3 evaluators. The translation students received better grades when translating into Spanish (their native language) whereas bilinguals scored better when translating into English. The author concluded that translation training modifies the translation students' behaviour which re-

flects developing expertise in the L2 to L1 direction. The fact that the changes are not reflected in the quality of L1 to L2 translation (Spanish to English) was explained as probably due to their “meagre command of English, excellent for everyday usage, but still lacking for a professional endeavour” (Martin 2006: 7).

Both studies (Malakoff and Hakuta 1991 and Gómez (2006) confirmed that bilinguals are able to translate in the sense that they can perform the task either in oral or in written modality. Both studies indicated that the formal quality of translations produced by natural translators indicates that apart from bilingual knowledge there are other capacities which are involved, and which probably would improve the formal quality of the product. However, the results also indicated that translation proficiency in the sense of the capacity to produce not only communicatively effective but formally adequate flawless translation “goes beyond the sum of the two language proficiencies”. Malakoff and Hakuta (1991) further suggested that “it may well be that translation ability is related to metalinguistic skills, a hypothesis that must be explored in future research” (Malakoff and Hakuta 1991: 157). The third factor, strategies which Malakoff and Hakuta mentioned as important for translation proficiency will only improve the performance as long as language proficiency and metalinguistic knowledge have reached an optimal level of attainment. This possibility is corroborated by the results obtained by Gómez (2006) with translation students who although equipped with a range of strategies which they must have acquired through training scored worse than natural bilinguals in a Spanish to English translation task. Yet, they performed better in forward English to Spanish translation. These results point to the importance of feeling at home with the two languages that one uses in translation though as indicated in chapter two achieving this kind of ultimate attainment is not an easy task.

Some translation scholars share the opinion of the composite character of translation as a skill. Lörcher (1997: 2014) phrased the innate predisposition as a “rudimentary ability to mediate” stressing that it cannot be perceived as a guarantor of the skill which allows to translate with facility and without heavy interference and in accordance with particular normative requirements. To quote Toury (1995: 245) translation skill “is precisely a matter of the development not unfolding of the skill” as this would simply mean that every bilingual could become a skilled translator (Nida 1981). Toury (1995) is decisive about the skill of translating saying that

It would seem much more convincing to argue that some additional factors are needed in order to trigger off the “specialized predisposition” for translating and set in motion – most probably, a certain combination of personality and environmental circumstances (Toury 1995: 245-246).

This indication of additional factors points to the notion of translation as a complex skill where language proficiency in both languages is necessary but not sufficient to translate between them without formal flaws. Yet, to say that translating is not a natural bilingual skill would mean to deny empirical facts.

### 3.2.2. Natural translators are translators

“There are thousands of children in the United States referred to as language brokers who have the responsibility of translating for their immigrant parents. Language brokers have broad roles as mediators and decision-makers” (De Ment et al. 2005: 255). They are asked to speak for others because they can do it, they can interpret and they frequently have to accept the grown up roles as multicultural communicators, interpreters and translators (Shannon 1990). Interpreting occurs between all kinds of languages (including sign language) whenever a message originally expressed in one language is on the spot retransmitted in another language (cf. Anderson 1978: 218 and Carr et al. 1997: 211). Indeed, it is only quite recently that researchers have started to pay attention to non-professional translation commonly referred to as language brokering (see Morales and Hanson 2005 for a review of the literature).

The social function natural translators are able to fulfil as interlingual communicators should not be underestimated. If it was not for the interlingual capacity of bilinguals to mediate meanings across language barriers everyday life in multilingual communities would be impossible to imagine. If for every interlingual encounter professional translators were needed possibly half of the world’s population would have to undergo translator training, and as it will be discussed in chapter four the training itself is only the starting point in the development of translation as a professional skill. What is more, in many respects natural translators make better community interpreters than trained translators. Coming from bilingual communities themselves they have a better understanding of the background knowledge which is essential to understand what is being said and what needs to be communicated, and what is likely to be misunderstood by an interlocutor

who usually has a different social and cultural background (Bullock and Harris 1997, Harris 1997). Of course, when examined under the cool eye of a linguist these linguistic exchanges may seem imperfect, erroneous, full of interferences and generally formally inadequate, but so is the spontaneous speech of bilinguals (see Grosjean 2002) and sometimes even of monolinguals. What matters is getting the message across and since most natural translation is done orally and falls under the category of community interpreting any ambiguities and misunderstandings can be clarified on the spot. Like in any other social encounter the L1 speaker, the natural translator and the L2 interlocutor will cooperate to communicate what is required in the situation whether the situation involves talking to an immigration officer, a medical doctor or any other speaker. Somehow it is deeply engrained in human linguistic interaction that interlocutors do not give in until they feel that the meaning has been negotiated and the communicative aim has been achieved. Natural translators take translation for what it truly is, a communicative strategy, and a tool that you have to use when language is a barrier, when two parties that need to communicate information to each other lack the knowledge of a common system of communication which allows to share meaning/sense/ideas/intentions.

Natural translation then is a communicative strategy, a tool which can be used with a range of skill and the only test of its communicative quality is how it makes communication possible across language barriers. Being natural it can lack all the professional refinements, all the metalinguistic care for formal correctness or stylistic embellishment. Natural translators are probably far from seeing translation as an operation on languages or even utterances, far from the structural attitude of seeing language as a system because language as knowledge of the system is secondary. Language as a social practice is of primary pragmatic importance (Hickey 1998). This communicative, functional adequacy after all is precisely what Translation Studies see as the desired feature of translation in general and of professional translation in particular (Vermeer and Reiss 1984 and their *skopos theorie*). Let us support the validity of this attitude to translation with a brief selection of quotes by those translation scholars who made fundamental contributions to our understanding of translation:

Translation to put it briefly, is not just an exchange of words and structures, but a communicative process that takes into consideration the reader of the translation within a specific culture (Kussmaul 1995: 1).

In effect in translation we do not operate with sentences at all but with utterances, i.e., units of discourse characterized by their value in communication. In certain types of translation then, it is both possible and necessary to aim at equivalence of pragmatic meaning at the expense of semantic meaning. Pragmatic meaning overrides semantic meaning in these cases. And we can then consider a translation a primary pragmatic reconstruction of its original (House 1997: 31).

Translation is more a process of explanation, interpretation and reformulation of ideas than a transformation of words: the role of language is secondary, it is merely a vector or carrier of thoughts (Newmark 1988: 72).

Undoubtedly, the functional aim in natural translation is in line with the above views and with the reservation made by Malakoff and Hakuta (1991: 143) that it is possible “to communicate meaning in the absence of correct sentence structure” in language whose form may be far from “the natural form of receptor language” (Larson 1984: 17). More so, since a lot of community interpreting done by natural translators is carried out in stressful situations including police arrests, seeking medical assistance, solving neighbourly conflicts, etc. the control over the use of language is likely to be taxed anyway (see chapter two on language control) and more likely to lead to slips of the tongue and language mistakes. Because of the services they provide natural translators deserve to be recognized as members of the translating community. As observed by De Groot (1997),

the phenomenon of natural translation, being coextensive with bilingualism, (...) may have implications for the training of translators and interpreters. What comes naturally need not be trained. Therefore, examining natural translations to understand their characteristics and to determine the knowledge and skills they manifest may lead to changes in existing translation and interpretation curricula. The time gained could then be used to devote more attention to those aspects of these skills that do not come naturally but require formal instruction (De Groot (1997: 29).

To sum up, it is possible that Harris’s (1977) tenet that translation is a natural predisposition in bilinguals caused needless debates which could have been avoided if the words ‘translation ability’, ‘translation skill’ and ‘translation competence’ were not used as interchangeable synonyms, but as suggested in chapter 1 as points on the developmental continuum of

translation as a human skill. Equating ability with skill and competence leads to false conclusions that ability guarantees competence, or expertise. It is much better to consider the three in terms of a developmental continuum. As pointed out by Sternberg the continuity of the development assumes that “human abilities are forms of developing expertise” (Sternberg 1998: 11). If Harris and Sherwood’s (1978) claim had been phrased, ‘translation as an innate predisposition’ then there could be “very little quarrel with the argument that a predisposition for translating, which may indeed be coextensive with bilingualism, is “part and parcel of mankind’s basic linguistic equipment” (Wilss 1982: 39). The powerful social need to communicate makes bilinguals act as intermediaries for those for whom language is a communicative barrier. They use translation as a communicative tool and it is perhaps not that translation is a natural innate skill but a necessity which enables people to fulfil a stronger human need, the need to communicate with others. Malakoff and Hakuta (1991) concluded their study with practical implications pointing to the fact that since the ability to translate is expected of bilingual children it can be used as a tool for research and language proficiency assessment (see Swain, Dumas and Naiman 1974). This natural ability can be then an ally in education where it can be used as “a psycholinguistic and sociolinguistic hook into amplifying the bilingual skills of students. It therefore should be used to enhance linguistic awareness and pride in bilingualism, particularly for minority bilingual children whose home language is not valued by the majority culture” (Malakoff and Hakuta 1991: 163).

The next section will be devoted to another unrecognized group of untrained translators, foreign language learners who display yet another facet of translation as a natural ability. By examining this facet it is hoped that some light can be shed on the initial stages of the evolution of translation as a human skill.

### 3.3. L2 learners as natural translators

If we accept that translation is a natural skill of bilinguals, there seems to be no reason why this natural skill should be denied to those bilinguals who come to appropriate their L2 via formal learning. In view of the all-inclusive definition of a bilingual (Linc and Kroll 2007) this extension of the term ‘natural translator’ seems justified. This section will examine the nature of translations produced by L2 learners who, similar to natural bi-

linguals and immigrant L2 users, frequently exercise their untrained ability to translate. Yet, translation as the fifth skill of an L2 learner has a complex history in language teaching theories and methodologies (see Vermes 2010 for a brief overview of the pros and cons).

### 3.3.1. Translation as the fifth skill of L2 learners

A lot has been written about the unfair treatment translation as a skill has received from SLA theories and SL teaching methodologies. To quote,

Despite the widespread popular assumption that translation should play a major and necessary part in the study of a foreign language, twentieth-century theories of language teaching and learning have at best ignored the role of translation, and at worst vilified it. From the turn of the century onwards almost all influential theoretical works on language teaching have assumed without argument that a new language (L2) should be taught without reference to the student's first language (L1) (Cook 2001: 117).

The rejection of translation tasks by L2 teaching methodologies is possibly an after effect of the Grammar-Translation Method (based on the so-called scholastic method involving reading foreign language texts with a dictionary and writing down a translation). As observed in the quote above banning translation tasks from the L2 classroom was also a straightforward consequence of the SLA theories (see Cook 2001: 119) and most notably of the Direct Method where teaching L2 excludes the use of the learner's L1 (Whyatt 2009b: 181). To quote, "The Grammar-Translation Method with its focus on formal accuracy, often using translation not only in exercises but also for testing, tormenting generations of language learners with texts of absurd complexity only to show them how little they knew, is without any doubt an approach which does not merit a revival, (...)" (Witte et al. 2009: 1). When translation is understood as transcoding, as it was the case in the Grammar-Translation Method (Howatt 1984) which was used to teach foreign languages since the Roman Times (see Malakoff and Hakuta 1991), it entirely misses the concept of translation as intercultural communication. As observed by Malmkjaer (1998: 3), the Grammar Translation Method might have worked well with scholarly, studious people with "an analytical bent who enjoy learning grammatical systems" and whose main aim was to learn to read foreign texts. However, when applied to the teaching of modern languages in schools where students with varying abilities are



grouped together, it failed. As observed by Howatt (1984: 133) the Grammar Translation Method mirroring the teaching of Latin placed the emphasis in the teaching of modern languages also on grammar and written language with complete disregard for spoken language (for the history of the method see Malmkjaer 1998). With priority given to speech in the early 19<sup>th</sup> century, the usefulness of the Grammar Translation Method was questioned and together with the rejection of the L1 by communicative methodologies, translation as the fifth skill of a bilingual was banned from the L2 classroom.

As observed by Cook (in Baker 2001: 119) the Direct, Communicative Method demanded that L2 learners' attention should be focused on communication and meaning rather than on form in the hope that such an approach will stimulate the subconscious acquisition of the L2 system (Krashen 1982). "Translation which implies conscious knowledge of two language systems and the deliberate deployment of both, is not among the activities compatible with this belief" (Cook in Baker 2001: 119). In consequence with no value attached to the learner's L1 translation had no role to play and was even considered by some as potentially harmful to the L2 learning process. Malmkjaer (1998) in her introduction to *Translation and Language Teaching* reviews the objections raised by anti-translationalists including Lado (1964) and Gatenby (1967) as to why translation tasks should not be a part of foreign language teaching. Malmkjaer (1998: 6) compiles the following list of arguments raised against the use of translation in the foreign language classroom including the opinions that translation:

- is independent of the four skills which define language competence: reading, writing, speaking and listening
- is radically different from the four skills
- takes up valuable time which could be used to teach these four skills
- is unnatural
- misleads students into thinking that expressions in two languages correspond one-to-one
- prevents students from thinking in the foreign language
- produces interference
- is a bad test of language skills
- is only appropriate for training translators

As observed by Malmkjaer (1998) the 'doggedness' with which the above arguments have survived now up to the 21<sup>st</sup> century shows that 'there must

be some truth in them' possibly stemming from a common misconception about the nature of translation (see chapter 1). However, "if the types of exercises used in language teaching resemble the types used in translators' training programmes reasonably closely" (Malmkjaer 1998: 6) then the above arguments 'fall away, one by one'. If translation is "grounded in a sound understanding of the principles which should underlie all translation activity" (Stibbard 1998: 69), it can be a useful pedagogical tool.

The tides about the place of translation in L2 teaching are certainly changing and the more welcoming approach is supported by the continuous efforts to understand how two languages coexist in one mind (see chapter 2). With more and more evidence that L2 learners might need to organize their two linguistic systems whether subconsciously or more consciously translation as a pedagogical tool is being re-discovered.

Translation is intuitive and necessary and inevitable in the process of learning another language and also in the process of understanding another language through an intermediary (Pellatt 2002: 126). For the following reasons: Translation is a reality in everyday life, and becomes more so as society is increasingly globalized. We translate constantly in non-professional contexts such as instructions, timetables, ingredients, letters (Pellatt 2009: 345).

As observed by Pellatt and many others (see Witte et al. 2009) the benefits of letting L2 learners employ their bilingual knowledge (not only L2 competence) give learners an opportunity to become aware of the more subtle data extremely relevant for their communicative competence, which, however, cannot be taught in classes where only the L2 is used. These reasons combined with the social expectations that bilingual language users should be able to translate should not be ignored. Why should we not prepare our L2 learners for the tasks which are ahead of them as participants in multilingual communities in which intercultural competence is an essential part of communicative competence (Cook 2010)? Indeed, recent interest in the benefits of translation tasks for developing bilingual competence supports the need to reinstate translation as the fifth skill of L2 learners. Some L2 teachers admit that translation might have been banned by theorists but in fact it has never left the L2 classroom, and certainly it has never left the L2 learner's mind (Zojer 2009: 31, Witte 2009: 82). Translation, as pointed out by Malakoff and Hakuta (1991) with reference to natural translators (language brokers), is indeed a powerful ally in amplifying pride in bilingual-

ism, which in the context of foreign language learning can be used to enhance L2 performance as well as to integrate multilingual communities. As pointed out by Malmkjaer (1998) translation as a task cannot be done unless a fair amount of reading and writing in the learner's L2 has already been done and a satisfactory level of proficiency in the basic skills has been achieved. Translation can be viewed as a skill which integrates all other language skills (Whyatt 2008).

In March 2008 a conference entitled "Translation in Second Language Teaching and Learning" was organized by the National University of Ireland. It gathered translators, translation trainers and language teachers who discussed the various uses and benefits of translation tasks in the L2 classroom. As the selection of articles in the volume with the conference proceedings entitled, *Translation in Second Language Teaching and Learning* (Wittie et al. 2009) shows that all of those who spoke about the useful applications of translation share the modern understanding of the translation process which has its communicative, cognitive as well as social requirements. Yet, the L2 learners who were the subjects of the studies presented by the conference participants were not discouraged by translation tasks despite, "the sheer complexity of the phenomenon" (Walters 2005: 209). On the contrary, there are a significant number of studies which report on the positive attitudes L2 learners have towards translation as their fifth skill (Sewell 2005, Whyatt 2008, 2009b). These positive attitudes themselves speak for the use of translation in the L2 classroom (see also Cook 2010, Leonardi 2010).

More and more voices can be heard about using translation tasks as an educational tool. Colina (2002) appeals for 'fostering closer interaction among SLA, language teaching and translation studies'. In her words, "in 2nd language acquisition, translation, as a form of language use, is not a language transfer exercise or a search and replace operation, but an activity performed with the objective of achieving a particular communicative function across cultural and linguistic barriers". Anderman (1998: 45) reports that in 19 out of 21 British universities "translation was taught as a way of improving students' linguistic proficiency, that translation is used to consolidate L2 constructions for active use and monitor and improve comprehension of L2". Sewell (2005: 153) in her article entitled, "Students buzz round the translation class like bees round the honey pot – why?" analyzed five groups of reasons why she believes translation is perceived as the answer to some very deep-seated impulses felt by many

language-learners. These reasons included: the need for confidence and self-esteem, the need not to lose face, the need to be rewarded, the need for certainty, for closure, for autonomy and the needs arising from any introversion in our personalities (Sewell 2005: 153). In her view translation as a task is “immensely satisfying. It is analogous to cooking – you end up with a product you can call your own, the fruit of your individual, sustained labour. Your ST [source text – BW] is the basket of ingredients which you “treat” in various ways in order to produce your delicious dish. The production of the dish constitutes the “reward” or satisfaction you get out of the process” (Sewell 2005: 156). It should be added, however, that contrary to cooking there is no set recipe to follow in order to produce a good translation. This open-ended nature of the activity adds to the challenge, stimulates creativity and slowly builds up self-confidence as a result of repeated exposure to doubt. It then does not come as a surprise that for EFL students the task of translation is regarded as a kind of a brain teaser, an intellectually demanding exercise, challenging but rewarding and therefore enjoyable (see Whyatt 2008). Needless, to say in the process of translating a text there is a constant mixture of solid knowledge and intuition summoned to solve open ended problems.

Following Jensen (1998) challenging tasks are usually highly motivating and completing them is considered highly rewarding. Embedded in such a positive aura, it is to be expected that the memory traces left in the form of newly acquired knowledge will be much stronger than in the case of mechanically performed grammatical or lexical exercises. The intellectual involvement needed to translate a text, combined with gradual problem solving and decision making intrinsic to the translation process (see Piotrowska 2007) can indeed be compared to playing a game, or a running event with hurdles which have to be overcome. Completing this challenge brings self-satisfaction.

Whyatt (2008) offers an insight into areas which can benefit from the use of translation in the second language classroom and suggests that the relationship between bilingual knowledge and interlingual skills is that of mutual benefit. Anderman (1998: 46) points to the fact that through translation students’ text awareness is raised. Further support for the reintroduction of translation as a valuable skill which can bear fruit in terms of enhancing and advancing L2 learners’ bilingual competence comes from respected and renowned scholars in applied linguistics and SLA. Malmkjær (1998) quotes Cook (1996) speaking in favour of translation as a task

which can promote multilingual competence and is therefore a valuable teaching/learning tool. Harden (2009: 120) suggests that translation is useful in helping students acquire conceptual fluency and metaphorical competence which is problematic even for advanced L2 learners with a relatively high level of verbal fluency (see chapter 2 on conceptual proficiency). In Harden's estimation communication in the foreign language alone, being "driven and restricted by certain need, (...) more often than not leaves insufficient room for reflection of the interaction between the L1 and the L2. This interaction in the L2 learner's mind is a well established part of the learning process". Harden (2009) points to the stimulating 'cross-fertilization' between the two languages of the L2 learner and concludes in the following words: "Translation exercises, used properly, can provide the opportunity to reflect on the conceptual frameworks of both languages involved as they are not focused on immediate communicative needs. The written language is not ephemeral and thus lends itself to trials, errors, and retrials more easily than the spoken word" (Harden 2009: 130). Whyatt (2007b) suggests that through translation L2 learners re-discover all the simple facts about language use and communication which they have taken for granted. Through their translation experience including in-class discussion and post-translation analyses "students in a guided way gradually come to view language in a holistic way with its intricate network of connections reaching far beyond its linguistic means into culture, reality, imagination. With awakening the students' self-awareness of the orchestrated effort one has to make to carry meaning cross-linguistically, the task of translating itself becomes for them a more and more rewarding activity". This positive attitude is something language teachers could capitalize on (see Sewell 1996). On the other hand, the fact that through structured translation practice L2 learners become aware of what is expected of professional translators is something not to be thrown away by translation trainers (Mackenzie 2004). Christiane Nord (1991: 165-166) says that translation practice in the language class could develop skills which will later become a part of translation competence including an awareness of contrastive structures, or the effective use of dictionaries (Pym 2003). Although as pointed out by Pym this view was not popular in the early 1990s where more voices were heard supporting dividing language learning from translator training.

House (1986: 182) did bravely insist that acquiring communicative competence was the aim of both the language class and the teaching of translation. Despite the trend of the 80s and early 90s when many translation schools, at least in Europe, were struggling to mark out their territory with respect to the established departments of Modern Languages. Mary Snell-Hornby, for example, was urging translation schools in Eastern Europe to “cut the umbilical cord” with the Modern Language departments (1994: 433) (Pym 2003).

The above quote shows that even translation scholars have started to notice that L2 teaching methodologies and translation training methodologies share the aim of optimum attainment in bilingual knowledge. There are still some voices that translation and L2 education should be kept apart but in view of the increasing understanding of both proficiencies they appear unsupported by evidence. To reconcile conflicting views on translation in language teaching Klaudy (2003: 133) suggests that a distinction should be made between pedagogical and real translation which differ in terms of: the function, the object and the addressee (cf. Gile 1995: 22 distinguishes between school translation and professional translation). Although the distinction is methodologically useful it is not essential when analyzing translation as a developing skill. Since the focus in this work is on the evolution of translation as a human skill analyzing how L2 learners perform translation tasks and how their performance changes with more exposure to translation activities and following the feedback they receive from the teacher or their peers, can inform us about the early stages of the skill and complement the knowledge gained from natural translation studies.

### 3.3.2. Studies in L2 translation

In contrast to natural translators L2 learners, at least initially, see translation as a matter of converting languages, a simple transformation of words and structures. When translating they are preoccupied with searching for equivalent expressions, mostly at the semantic level, they calculate equivalences and semantic overlaps trying to stay as close to the original as possible. Not surprisingly translation is hard work and the lack of linguistic self-confidence results in the frequent use of bilingual dictionaries. This attitude is probably justified by the methods via which language used to be taught, and still continues to be taught by some

teachers. As noted by Krings (1986a), Lörscher (1986, 1991, 1992), Kussmaul (1995), Gerloff (1986), Whyatt (2000, 2007a) and others L2 learners with very low or low level of proficiency will translate by association of L2 forms with their L1 translation equivalents and will do so without reference to the conceptual/meaning layer of their mental lexicons. Lörscher (1991) referred to this tendency as form-oriented translation. De Groot (1997) used the term horizontal translation in contrast to vertical translation which is sense-oriented. Presas (2000: 25) used the term associative translator to refer to translations characteristic of amateur translators who translate by associating L1 and L2 forms, and in consequence frequently mistranslate rather than translate falling into traps of false friends and taking seemingly similar words as sharing identical meanings ('actually' as equivalent to the Polish *aktualnie* meaning 'currently'). As can be expected L2 learners as translators at least initially represent the type of translator perceived as amateur, unskilled producing awkward incomprehensible translations (branded *translationese*) full of L1 interference and generally regarded as a highly undesirable third language (Duff 1981). The blame for this kind of flat or horizontal transcoding was put on the manner of teaching/learning a second language which heavily relied on the vocabulary learning of word lists in both languages. As was discussed in chapter two this tendency is explained by the developing structure of the learners' bilingual lexicon and their low conceptual proficiency and weak language control mechanism, all being a result of L2 teaching methods which no matter how hard they try cannot imitate the L1 acquisition process.

in standard non-natural L2 acquisition where a new language is taught via classroom instruction there is a reversal of the L1 acquisition process. When acquiring L1 the intention to communicate meaning that Paradis (1998: 3) called the "micro genesis of an utterance" comes first and well before the actual word labels for things are acquired. L2 teaching often starts with the labels (foreign words) which are imposed on the L1 labels and it is taken for granted that the learners themselves will make all the necessary conceptual connections to encode not only the form but also the meaning. Teaching the rules of grammar is often given priority and a focus on form overrides concern for the content (Whyatt 2009b: 182).

Having such language acquisition history, as well as having been repeatedly penalized for applying wrong word forms, tenses and violating the

rules of English syntax during tests which focus on the formal aspects of language, it is not surprising that L2 learners themselves attach more attention to form than to meaning also when they translate.

Many studies into the nature of translation performed by L2 learners confirm this focus on form. Lörcher (1986, 1991, 1992), Krings (1986b) and Gerloff (1986), among others investigated the translation process using the method of thinking aloud in which L2 learners with sometimes only an intermediate level of proficiency were asked to translate a text orally at the same time verbalizing all their problems and dilemmas (see Borch 1986 on the history of the method). Verbal data collected in the form of Think Aloud Protocols (TAPs) showed that L2 learners defined as 'inexperienced translators' concentrate on linguistic forms without analyzing their meaning with respect to the context. Lörcher (1991) pointed out that the form-oriented approach is favoured among L2 learners (see chapter 2 on lexical links between L1 and L2) and only if it fails to produce any kind of equivalent TL form, the sense oriented approach is taken (see Whyatt 2006b). To quote:

Substitutions of signs mainly occur in the lexical domain and result from vocabulary equations which the subjects have learned in foreign language lessons at school or at the university. Above all, decontextualized and purely sign-oriented vocabulary learning, which even today is rather widespread, forms and provides a large number of purely surface-structure lexeme equations (...) which become available to the subject through an automatic association process (Lörcher 1992: 408).

Whyatt (2003) pointed out that the focus on form is present even at the stage of reading an L2 text for translation (see Bajo and Macizo 2004). During the first encounter with a text in L2 learners at a fairly advanced level of language proficiency (2BA in English Studies) who were classified as beginners in terms of translation competence due to their limited experience in translation (they completed one semester of a translation course as a part of their practical English module) tended to underline unknown words (33%) and use a dictionary (9%). In contrast, with growing experience in translation and only a slightly higher level of language proficiency (3BA in English Studies), only 9% of the subjects classified as intermediate in terms of translation competence (they completed 3 semesters of a translation course as a part of their practical English module) underlined unknown words and no subjects used a dictionary during the first



reading. With advanced L2 learners (2MA in English Studies) and advanced level of translation experience (students just about to finish their conference interpreting programme) no subjects underlined unknown words or used a dictionary during the first reading before translating the text but they admitted to thinking about translation problems during the first reading (75%). In the group of beginners only 48% reported thinking about translation problems when reading for translation but the percentage was higher (64%) in the intermediate group. This change of approach to the text to be translated is probably due to the fact that practice in translation first of all makes students aware of the need to explore the context for clues about the textual/functional meaning of an expression. It is also possible that the developmental shift in approaching a translation task is facilitated by the developmental shift in the way L2 learners access their bilingual mental lexicons. As discussed in chapter two the focus on form rather than meaning can be explained by the organization of L2 learners' bilingual lexicon which at the initial stages of L2 appropriation is subordinate with strong lexical links between L1 and L2 and weak conceptual links between L2 forms and their mental representations. A translation from L2 into L1 then relies on the process of association using direct lexical links often without checking for the conceptual/meaning content of the lexical items. As can be expected such word-for-word translation can, and frequently does lead to amusing translation.

Focus on form and lack of confidence in vocabulary use was confirmed by the study of dictionary use by L2 learners in the process of translation. Varantola (1998), Atkins (1998) and Whyatt (2006a) pointed to the general tendency among L2 learners performing translation tasks to over rely on bilingual dictionaries in search of TL equivalents rather than checking monolingual dictionaries for the meaning of L2 lexical items. Whyatt (2000) reported that during an L2 to L1 written translation from the 231 words that were checked in dictionaries, 156 cases were a search for the desired TL (target language) forms with a possible exclusion of the meaning analysis of the SL forms in their actual context.

To sum up, comparing natural translators to language learners without experience in translation and without awareness of the cognitive processes translation involves, it is clear that there is a problem with conceptual proficiency. In a way then the form-focused approach to translation shows that the complex nature of language as a socio-cultural construct (see Gardner, 1979: 193) which makes its forms inseparable

from their socio-culturally established meanings, connotations or innuendos may initially exceed an L2 learner's cognitive abilities. However, as pointed out by Pavlenko (2005: 446) conceptual transformation must follow second language learning. So far, it has not received sufficient attention from psycholinguistics and second language acquisition theories alike and it has been neglected in L2 teaching and learning methodologies. It is possible that translation tasks which by nature involve both attention to form and meaning could be used to speed up the acquisition of conceptual proficiency. Research into L2 translation shows that the initial form-focused approach adopted by L2 learners gradually but fairly quickly gives way to meaning-based translation with more exposure to translation tasks combined with corrective feedback from their teachers or peers (Whyatt 2007a, 2009a). It seems that similar to the suggestion made by the mental lexicon research (discussed in chapter 2) there is a developmental shift involving a change of attitude towards form – meaning relationships observable in how the L2 learners' untrained translation ability is being transformed into a more skilled translation performance. Some evidence can be found in TAP studies (Whyatt 2008) and deserves some attention as a potential turn in the process of the evolution of translation as a human skill.

#### 3.4. Developmental shift in translation as a bilingual ability of L2 learners – TAP studies

Most, if not all, empirical data on the progression in the range of translation abilities demonstrated by L2 learners comes from translation process studies which used the method of Think Aloud Protocols (TAPs). Thinking aloud is a method taken from introspective psychology (see Börsch 1986 for details) which has been used to study the translation process by such scholars as Krings (1986a, 1986b), Gerloff (1986), Kiraly (1995, 1997), Lörcher (1991), Kussmaul (1995), Jääskeläinen and Tirkkonen-Condit (1991), Whyatt (2000, 2010). It was the first empirical research method to provide any insight into mental processing when translating. In the experiments subjects were asked to translate a text and at the same time verbalize all the problems and dilemmas they experience while performing the task. These verbal reports, called Think Aloud Protocols (TAPs) were tape or video-tape recorded and analyzed with an aim to reveal what goes on in the translating mind ('the black box'). However, as pointed out by Ericsson and

Simon (1984) the subjects could only verbalize what they were consciously processing and as a result anything that they were able to translate without conscious problem solving and decision making became inaccessible through TAPs. This limitation of the method became the reason for criticism received by the researchers who studied TAPs (see Snell-Hornby 2006). Hönl (1991), for example suggested that the term Talk Aloud Protocols would be more appropriate than Think Aloud Protocols. In his article, "Holmes' 'Mapping Theory' and the landscape of mental translation processes", he pointed out that in the translation process conscious processing is intertwined with subconscious processing, cognitive and intuitive processes complement each other and contribute to finding solutions for specific translation problems. This complexity of the process remains unquestionable in TS literature. However, no matter how partial an insight into the translation process was gained thanks to TAP studies it has contributed to an increased understanding of at least the conscious side of the process (see Cronin 2005, Piotrowska 2007). Analyzing this, in a way verbalized inner speech of a translating person allowed to find some patterns in the performance which leads from a SL text to its TL translation. It is through a TAP analysis that translation became to be perceived as a problem solving, decision making activity (although many scholars had earlier indicated these aspects, e.g., Levý 1967). It became clear that the process of meaning transfer proceeds smoothly until a specific problem breaks up the translation flow, is immediately identified as a problem and to use Hönl's term passed over to the 'conscious workspace' and it can then be verbalized in TAPs. Obviously, like in any general action theory, the conscious mind will make plans (or use strategies) to solve the problem using all the available cognitive resources.

TAPs showed that translators use a range of strategies and the choice of strategies will depend on their translation proficiency. Gerloff (1986) studied the TAPs of foreign language (L2) students with no previous experience in translating and reported on their overreliance on dictionaries and their superficial meaning analysis which resulted in word-for-word translation (note the parallel predictions of the RHM of mental lexicon discussed in chapter two). The focus on form frequently sacrificed meaning and led to odd incomprehensible translations. Although many scholars who used L2 learners as subjects (Krings 1986b, Lörcher 1986, 1991) were criticized for publishing results with general conclusions about the translation process (see Snell-Hornby 2006), their research stimulated

more interest in the translation process as well as it provided some insight into translating done by inexperienced translators, L2 learners with a low level of L2 proficiency.

The Think Aloud Protocol studies of inexperienced translators can be used to infer information about the initial stages of development of translation skill. The form oriented horizontal translation (discussed in the previous section) was characteristic of L2 learners or users for whom:

- a) translating is a novel experience
- b) L2 proficiency is at a low level (beginners or intermediate)
- c) Translating relies on bottom-up processing
- d) Interlingual transfer operates on small translation units (words or phrases)
- e) Contextual information is not used for meaning interpretation

TAP research which mostly focused on the range of strategies applied to creative problem solving in the translation process (Mackenzie 1998, Kussmaul 1991) reported that with growing experience in translation tasks L2 learners show signs of transformation from form-oriented to a sense-oriented approach. Whyatt (2000, 2006b, 2007a, 2007b) studied the TAPs of advanced EFL students after a yearly course of translation and reported that there are signs of a transition from horizontal processing towards vertical processing which:

- a) is a feature of professional translators
- b) involves effort aimed at a detailed analysis of meaning
- c) makes use of top-down processing to verify bottom-up processing
- d) interlingual transfer operates on larger textual/discourse units
- e) contextual information is explored and used for meaning interpretation

What is more, the analyzed verbal reports by students who participated in a yearly course of translation show that in comparison to absolute beginners they exhibit much higher metalinguistic awareness. A lot of verbalizations demonstrate that apart from problem spotting and problem solving procedures an important metalinguistic skill becomes detectable in the translation process. Subjects start to self-monitor their solutions and frequently reflect on language and the socio-cultural context of languages they use in the process. The growing awareness of being involved in in-

tercultural communication which disclosed gaps in intercultural competence seem to be the first turn in the development of translation ability towards the stage of skilled performance. Then the realization that translation is a purposeful activity which must fulfil its communicative function brings care for how the emerging TL text is structured and which words are chosen out of many competing equivalents. As a result metalinguistic awareness is developed and used to ensure a good quality translation product. Let us devote some attention to these fundamental developments in the evolution of translation as a human skill.

### 3.4.1. Intercultural competence

It is possible that neither the teachers nor the learners themselves are aware of how little L2 learners know about the everyday practicalities of the L2 reality for a simple reason that the need to know them has never arisen (Whyatt 2008). Translating however makes these specific demands even in a text as simple as an Old English Apple Pie recipe (see Whyatt 2008) which, according to the translation brief received from the teacher, was requested by a neighbour who wanted to make the cake. The L2 learners when translating the text will inevitably start comparing the two realities, Polish and English traditions, inherent expectations, available ingredients, etc. In consequence they will classify the conceptual content of the lexical items as the same or different to their own mental representations of reality lexicalized in their own native language. Being aware of their reader's expectations and the range of concepts which are within the limits of his/her comprehensibility they will perform a truly intercultural task while translating the text. In effect the information included in their bilingual mental lexicon will be more precise in terms of conceptual content and the conceptual-lexical links will become clearer.

If one follows Levý (1967) in his view that a text is a picture of reality it must be seen as standing in some kind of relation to the socio-cultural heritage it is a part of. Therefore, in the understanding of the text, students quickly learn that they have to go beyond the understanding of the linguistic means into the understanding of some section of reality (Whyatt 2007b: 139-140). A similar perception of a text, or rather a text reception process, which has been used in TS (Snell-Hornby 1988) is Fillmore's (1977: 61) frames-and-scenes metaphor where the reader in the process of interpreting the SL text has to come to see the scene that the author of the

text wanted him/her to see. As suggested earlier the way this scene will be re-created in the mind of the reader/translator will depend on how the frame is structured, and on all the backstage cognition the reader/translator brings into the comprehension process. At this point however, the translator is only half way through the translation process. Next the scene has to be put in a TL frame so that it can, upon being read by the TL receiver, be again unravelled into a meaningful scene, which depending on the function of the translation, can be an authentic reflection of the scene intended by the SL text author. Both metaphors assume a fluent cooperation between the lexical and conceptual knowledge and there is no doubt that this specific communicative transaction requires intercultural competence, defined here as an awareness of conceptual similarities and differences between the two languages and their respective realities.

In fact there is a twofold difficulty to be faced by an L2 learner/translator in this respect and depending on the direction of the translation. First, when translating from L2 into L1 he/she has to get to know the relevant section of the L2 reality to ensure an adequate understanding of the SL text for translation. As pointed out by Komissarov (1991: 43), “understanding can be achieved only if the information contained in language units is supplemented by background knowledge of facts referred to in the message”. In L2 to L1 translation intercultural empathy defined as the human ability to put oneself in the position of another person will at least in theory be easier to achieve because of the shared cultural background with the TL text readers. However, in L1 to L2 translation, intercultural empathy with the L2 addressees is much more difficult to achieve even for experienced translators as it requires not only the knowledge of the L2 culture but also the ability to see the translator’s L1 culture with the eyes of the L2 reader equipped with a different cultural heritage and thus different expectations. In both situations intercultural competence is essential to see the SL text and its TL translation as being a part of a larger extralinguistic context.

Gud, Kunst and Kim (1992) distinguish two types of contexts that function in intercultural interaction (including translation): external and internal. The external context includes the setting and location of the actual interaction and the meanings ascribed by the society to those two factors. The internal context, “is the culture that interactants bring to the encounters” (Byram and Feng 2005: 912). Byram and Feng point out that, “in intercultural communication misunderstanding is much more likely to

occur because the internal contexts that is the ways interactants use to perceive the situations and each other and the meanings they associate with the settings can differ greatly from one culture to another” (Byram and Feng 2005: 912). Similarly a majority of translation errors committed by inexperienced translators with a low level of conceptual proficiency do not only result from poor linguistic skills but they are frequently an outcome of low conceptual proficiency underlying their use of L2 (see chapter 2) and low intercultural competence. Recent research into the complex phenomenon of Cross Linguistic Influence (CLI, see Jarvis and Pavlenko 2008) provides many examples of language transfer. By practicing the skill of translation and analyzing their translated texts in a translation class, where the L2 learners ideally receive feedback sensitizing them to conceptual transfer, they become aware of the similarities and differences at the conceptual level of their mental lexicon. Some concepts are shared, some are unique to only one of the languages and others overlap only to some extent (see De Groot 1992, Pavlenko 2009). This intercultural awareness is what L2 learners gain first of all from having to use both their languages in translation tasks.

Fostering intercultural competence in L2 learners is a subject of growing concern among some SLA scholars. The educational challenge of the Intercultural Approach is immense, especially taking into account the dynamics involved in the concept of culture. Witte et al. (2009: 6) quotes Matsumoto (2000: 24) saying,

Culture is a dynamic system of rules, explicit and implicit, established by groups in order to ensure their survival, involving attitudes, beliefs, norms, and behaviours shared by a group but harboured differently by each specific unit within the group, communicated across generations, relatively stable but with the potential to change across time (Matsumoto 2000: 24).

There is a general awareness among those interested in the intercultural aspect of L2 teaching and learning that intercultural competence is very much left out of L2 teaching methodologies. As pointed out by Byram and Feng (2005: 925) both the intercultural competence and empirical research on its acquisition is “still very limited and at any rate far more limited than that of studies investigating second language acquisition” (Byram and Feng 2005: 925). This does not mean that the awareness of the importance of intercultural competence is not present as confirmed by the recently increasing

number of publications which address the interplay between language and culture (see Hinkel 1999). There is also a common understanding that intercultural competence is difficult to teach for many reasons. First, L2 teaching is still very much linguistically oriented despite the fact that communicative competence has been a key aim in foreign language teaching methodology for decades. Culture in modern language departments is often taught as a knowledge subject. Byram and Feng (2005) strongly object to teaching culture in the ‘fact-oriented approach’ where culture is dissected into smaller sections which constitute separate topics for teaching. Culture in this fact-oriented approach is viewed as the ‘big C’, that is culture as civilization, as well as the ‘small c’, culture in everyday life. Kramsch (1993) cited by Byram and Feng (2005: 917) views this approach as ‘inappropriate or even damaging’ as it ignores the fact that culture involves ‘a social construct, a product of self and other perceptions’ (Kramsch 1993: 205) and might ultimately lead to teaching stereotypes and what is worse promote ethnocentrism. Instead, Kramsch (1993) suggests that language should be taught as ‘social practice’ where the focus is on relevant socially situated meanings. Translation tasks seem to fit very well in this paradigm and the recent revival of the interest in using them to promote intercultural competence in L2 learners seems well justified (Witte, et al. 2009, Cook 2010). By performing translations L2 learners not only acquire and enhance bilingual knowledge but they participate in intercultural communication.

To elaborate on the acquisition and participation issue, Pavlenko and Lantolf (2000) use the distinction between two approaches to L2 learning made by Sfarid (1998), the acquisition and participation metaphors. In the acquisition metaphor language learning is viewed as acquiring knowledge like an object or commodity which involves learning and internalizing rules and specific linguistic entities. In the participation metaphor learning is a process of becoming a member of a certain community (Sfarid 1998: 6). Yet, mature L2 learners, e.g., students of foreign language departments at university level who study a foreign language to be teachers, translators or to use their expert knowledge in any other ways, are very much aware that their aim is not to see themselves as members of another culture. Their aim is to be able to meaningfully participate in the L2 community, but since they will always bring their own culture into this participation, the participating itself is intercultural and consequently enriching for both sides of the communicative interaction.



In contrast to other language tasks in which only L2 is used, translation by its nature includes the intercultural aspect of communication. L2 learners do start with a focus on forms when translating for the first time or in the first stage of translation skill development but they very quickly, especially when given appropriate corrective feedback on their translations, become to realize that in translation not only two languages but two worlds meet. Negotiation of meaning like in any other kind of communication has to account for the background information which the participants, here the L2 learner, the text to be translated and its potential receivers bring with themselves (the inner context). Are the L2 learners prepared for considering intercultural issues in their L2 communicative competence? Or are they left on their own in a tacit expectation that they will anyway in their own minds build some bridges between the two cultures, comparing them and finding what they share and what is perceived as different, or foreign? Although there is more awareness of the need to prepare the L2 learners for intercultural communication, there is lack of research on the acquisition of intercultural competence (Sercu 2004: 84). It is possible that translation as a part of the curricula for students of Modern Language Departments at the tertiary level is a valid source of intercultural education. Indeed, research shows that L2 learners at university level value and enjoy translation tasks and use them as a gateway to their intercultural competence (Whyatt 2007b, 2008, Sewell 1993, Sewell 2004). Acquiring intercultural competence is possibly a lifelong process, but getting it started in the L2 classroom which gathers future language experts, is essential although difficult due to limited exposure to L2 socio-culture. Translation tasks seem to provide a virtual reality substitute for authentic cross-cultural communication.

However, many scholars remain sceptical about whether intercultural competence can be achieved in institutionalized foreign language teaching. Kordes (1990: 287-288), Byram and Grundy (2002), Swain and Lapkin (1998, 2000) report on the disappointing effects of foreign language teaching with respect to the L2 learners' intercultural awareness. Block (2007) as cited by Witte (2009: 93) concluded that intercultural competence<sup>2</sup> cannot be attained in foreign language learning institutions or by a Year Abroad experience of being immersed in the foreign language community (Block 2007: 145-185). Some scholars suggest that only 'pro-

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<sup>2</sup> which he sees as developing a 'second language identity'.

longed and intensive exposure to the foreign language society can facilitate a second language identity, or in our context, an intercultural competent translator” (Witte 2009: 94). Although it might be true, it is not an option to consider for millions of foreign language learners and aspiring translators. Other means have to be found to foster intercultural competence (Block 2003). As suggested by Byram and Feng (2005: 925) culture learning can be done as socialization by the teacher as a mediator into another culture and should be combined with encouraging the students “to reflect critically and analytically on their own culture”. Through comparing, juxtaposing and analyzing they become in the process informed intercultural mediators.

Indeed, there is another important dimension to learning about L2 reality through practicing translation skill. Translation tasks as an intercultural endeavour imply an important change in the L2 classroom. Room has to be granted to the L2 learners’ both languages and cultures and this means democracy in the L2 classroom. “The fact that students are asked to compare a foreign reality to their own helps them to feel that they can contribute to an informed debate, instead of depending on the ‘know-it-all’ teacher” (De Oliveira Harden 2009: 370). As pointed out by some researchers (Cronin 2005, González Davis 2004, Auerbach 1993, Witte 2009) with their native language allowed back into their L2 learning process, the L2 learners are given a voice and cannot be silenced anymore because of not being able to express themselves fully in the foreign language. Translation does not favour one language over the other, but as observed by Auerbach (after De Oliveira Harden 2009: 370) the use of L1 “reduces anxiety and enhances the affective environment for learning, takes into account socio-cultural factors, facilitates incorporation of learners life experience” (Auerbach 1993: 20 quoted after De Oliveira Harden 2009: 370). Consequently, in translation classes the learners at last feel they are bringing something meaningful to their learning experience – their L1 and their native conceptual competence (Kramersch 2009). Resting on this solid ground they are keen to fill conceptual gaps underlying their L2 knowledge. In a translation class conducted along the lines of collaborative learning (González Davis 2004) and social constructivist ideals (Kiraly 2000) not only two languages but two realities and two worldviews meet. The conceptual level is scrutinized for differences and similarities and the intercultural translations are frequently a topic of heated debates. Students translating a recipe for an Old English Apple Pie into Polish, fiercely argue about the impossibility of

translating ‘cooking apples’ into Polish referring to their native conceptual competence according to which in Poland we do not formally distinguish between cooking apples and eating apples (see Whyatt 2008). Other voices are heard saying that people just know which apples to use for cooking and which are for eating. There are also suggestions that it might be a good idea to put the names of varieties of apples that are used for cake making in Poland. Then the name of the cake itself is problematic in translation, and all the possible existing kinds of apple cakes available in Polish culinary tradition are considered as potential candidates. Again lacking unanimous agreement students make their individual choices. Even the most quiet and inhibited learners feel they have something to say in a translation class (see González Davies 2004). To quote, since translation requires intercultural interaction, “[t]he students regain their voices, as individuals and as a group. They can not only express their opinions about the foreign text and about the translated text they eventually produce, but they can also disagree with the teacher, question his/her interpretative choices and even bring new information to the classroom” (De Oliveira Harden 2009: 370). This changes the privileged position the foreign language teacher has been occupying for decades in the classroom. The role of the teacher is that of a guide, negotiator and advisor (Király 1995) in the learners’ exchange of bilingual knowledge, worldviews and experiences. Such a democratic system removes anxiety and restores L2 learners’ self-esteem and, what is of utmost interest in education motivates the learners to work for their very much needed intercultural competence and take personal responsibility for decisions made to solve intercultural problems in translation (De Oliveira Harden 2009). This individual responsibility for the communicative quality of emerging TL texts forces the L2 learners acting as novice translators to weigh up the words they choose and reject others as not fitting the socio-cultural context of the TL reality. In other words there is a growing metalinguistic awareness in novice translators who meticulously scrutinize L1 and L2 words, their forms and meanings. This brings the second major transformation in the progression from translation as an untrained ability to translate to a more informed and more skilled translation performance.

### 3.4.2. Metalinguistic awareness

Metalinguistic meaning about language can be in its simplest defined as a more technical knowledge of language, its structure, constituting compo-

nents and function. Bialystok (2005: 125) distinguishes metalinguistic knowledge from linguistic knowledge as something related but qualitatively different from the application of linguistic knowledge in comprehension or production, as something added, a kind of embellishment, privilege of the few, the more intelligent, the more multilingual. On the other hand, she points out that any aspect of one's linguistic knowledge can become a part of one's metalinguistic knowledge if it is focused on and reflected upon. However, according to Paradis (2009) one's metalinguistic knowledge cannot be converted into linguistic competence, but remains available and can be used to compensate for gaps in L2 linguistic competence as it is frequently the case especially with late bilinguals or adult L2 learners.

(Bialystok 2005: 127) notes that bilinguals are at an advantage over monolinguals in terms of their metalinguistic awareness. Metalinguistic awareness can be defined as "an awareness or bringing into explicit consciousness of linguistic form and structure in order to consider how they relate and produce the underlying meaning of utterances" (Mora 2007). Metalinguistic ability is defined as the "ability to make language forms objective and explicit and to attend to them in and for themselves (...) the ability to view and analyze language as a thing, language as a process, and language as a system". As can be expected and as it was suggested in chapter 1, people differ in the range of their metalinguistic abilities which can explain the idiosyncrasy in the use of language in general. Some people, e.g., fundraisers can write an appeal letter which will make people open their hearts and wallets, whereas others struggle to apply for the benefits they are entitled to. While some learners are able to structure their performance during an oral exam in the way which makes the examiners disregard some gaps in their factual knowledge, others fail to show off with the knowledge that they truly possess. Research into the translation performance of L2 learners shows that when two languages and two cultures meet in one mind (Whyatt 2007b) metalinguistic reflection is a natural consequence. Gile (2004) considers it a significant ally in educating reflective practitioners.

Malakoff and Hakuta (1991) observed that

The evaluation of the target-language sentence, both in terms of the meaning it conveys and the sentence structure in which that meaning is embedded, requires the ability to recognize language as a tool and as a rule-governed system. The translator must evaluate his or her use of the

tool (...) it is this necessity to reflect on language and language use across two languages that makes translation a metalinguistic skill, *par excellence* (Malakoff and Hakuta 1991: 150).

When translating novice translators have to focus on form to derive meaning and look for appropriate verbal cladding in another language. In other words translators are in and out of language/languages. They have to objectify, gain a distance, focus on minute aspects which are mostly irrelevant in every day communication, then they observe their solutions and perform metalinguistic judgments, and finally they either accept or reject their initial decisions.

A good source of empirical support comes from TAP research which studied L2 learners performing translation tasks and which showed that L2 learners provide a lot of verbalizations in comparison with experienced translators who verbalize very little (Kussmaul and Tirkkonen-Condit 1995: 190). Whyatt (2007a) analyzed verbal reports by students who participated in a yearly course of translation and showed that in comparison to absolute beginners they exhibited a much higher metalinguistic awareness. Subjects start to self-monitor their solutions and frequently reflect on language and language use relevant to both linguistic systems which they use in the process. All of the experiences of objectifying, assessing, judging as appropriate or inappropriate make them more sensitive to both their native and their foreign language as a tool in cross-linguistic communication. The Self-monitoring of language production is a valuable metalinguistic skill which not only helps to control interference but generally allows one to gain some control over the two working languages. Yet, very little attention has been paid to the role of metalinguistic abilities<sup>3</sup> in the development of translation as a professional skill.

It seems that in translators with some but limited experience translation is essentially a metalinguistic activity which they try to consciously control (Whyatt 2010). González Davies (2004) termed this stage conscious incompetence and conscious competence. Through the practice of translation they develop their contrastive capacity which intrinsically involves comparing structures and words at the level of form and meaning. This interlingual experience has many effects on the L2 learner's view of language as a tool in cross-cultural communication (Whyatt 2007b). In the briefest possible

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<sup>3</sup> Cummins (1991: 70) argues that one's metalinguistic abilities are transferable and refer to the learner's both, or all languages just as one's writing skills.

way it is possible to say that through translation tasks learners experience linguistic relativity in the neo-Whorfian sense (see Pavlenko 2005, Jarvis and Pavlenko 2008, Whyatt 2008) when they look at words and structures in a translation close up they become metalinguistically aware of the limits of their own language and their foreign language. TAPs show the incredible low self-confidence in making decisions when the time comes for choosing one of the competing equivalents (to use the most *persona non grata* word of TS). Dictionaries are notoriously used as an authority and it is not rare to hear from L2 learners in reply to ‘why did you decide to choose this word’ a defensive reply, ‘because I found it in a dictionary’. Whyatt (2009a) pointed out that communicative confidence in L2 learners can be a way behind their communicative competence. Translation as a specific task places specific demands on the choice of TL vocabulary appealing for accuracy, contextual appropriateness, and stylistic choices matching SL and TL discourse patterns. The frequently favoured avoidance strategy, meaning that learners do not use words they are uncertain of is out of question in translation tasks. Instead they have to operate within the limits marked out by the SL text and the target language system. Their creativity is constrained and doubts arise, ‘can I use this word in this particular context?’ Krings (1986a) reported that his subjects not knowing which equivalent L2 word would correspond to an L1 word tended to choose the first one given in a dictionary entry. This is how frequently repeated funny translations arise when, for example the Polish word *rosół* [‘broth’] was translated as ‘culin’, because the first word in the bilingual dictionary entry next to *rosół* was the abbreviated domain label ‘culinary’ (culin.)<sup>4</sup>.

This attitude shows not only low L2 proficiency but also a lack of metalinguistic awareness referring to the multilayered relationships between form and meaning not to mention the contextual impact on meaning interpretation. Anderman (1998: 39), for example, quotes Christopher Hampton, British playwright and translator of Ibsen, who likened the process of translation to a “gigantic crossword puzzle involving a huge number of tiny decisions, from the choice of words to striking the right stylistic note, making the right decision on a number of different linguistic levels”. These choices are difficult for novice translators who “produce and select from alternatives” (Pym 2003: 10). Many comments in TAPs are “an expression of stepping outside one language system to

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<sup>4</sup> Agnieszka Chmiel (private communication).

objectify languages, rules, structures and functions” (Mora, 2007). Toury (1995) when rejecting Harris’s proposal of translation as an innate skill said that translation skill is dependent on one’s interlingual capacity that is the ability to establish similarities and differences across the two languages. This ability to make contrastive cross-linguistic judgments seems to fall within the realm of metalinguistic abilities. Learners, more than professionals who reap the benefits of their experience, while producing a translation constantly scrutinize their choices, assess the communicative quality of their TL version, engage in debates with themselves irrespective of the direction of their translation process. TAPs are a good source of the creativity involved in generating and selecting between equivalents as well as proof of the learners growing awareness of the increasingly necessary skills of text production (Koller 1992: 20, Gile 2004). As suggested by Malakoff and Hakuta (1991) the fact that through translation L2 learners start to reflect on the way they use language in the process of conveying meaning across language barriers suggests that they start to see language as a tool, as a means to an end and not an end in itself. This understanding is inherent in translation as a communicative activity. Later on in the development of translation to reach the level of expertise, the metalinguistic care for the quality of the TL text becomes integrated with intercultural competence and demonstrated in the growing ability to self-revise and adjust the translation to the needs and expectations of the TL text reader.

To summarize there is little doubt that structured exposure to translation experience (e.g., in a translation course for students of modern language departments) leads to some transformations in their view of language as a tool in cross-cultural communication (Vienne 1998, Whyatt 2007b). Research has shown that through practice the human ability to translate evolves from the intuitive naïve rudimentary attempt to mediate meaning from one language to another to a more conscious ability to extract sense/meaning expressed in a SL text and transport it into a TL text. In view of the fact that metalinguistic knowledge has received little attention from translation scholars, it is possible that its role in the makings of the translator has been taken for granted as many other issues such as SL text comprehension or the balanced bilingualism of professional translators. Analyzing its role in the process of translation skill development might throw light on some still unresolved issues, like for example why natural bilinguals do not make good translators (see chapter 2) whereas

translators who are non-native L2 users can produce a “better” translation than natural bilinguals (Shreve and Koby 1997: xiv). If being exposed to two language systems encourages metalinguistic awareness, then being exposed to translation tasks will by analogy further encourage metalinguistic awareness.

Another viable question to ask is what effect the experience of translating might have on the developing bilingual knowledge. Do bilinguals who become engaged in translation practice become interlingual individuals? In view of the ample data on the effects of bilingualism on cognitive and linguistic abilities, the question of the effects of translation practice on the cognitive and linguistic abilities of those who become actively involved is well justified. Some, although not many, interesting suggestions have been made and they point to a possible re-organization of the bilingual memory.

### 3.4.3. Re-organization of the bilingual memory

The interest in bilingual memory organization (see chapter 2) and lexical access in the translation process has been very modest among translation scholars. This may seem surprising in view of the fact that in translation, and more urgently in interpreting we are very much interested in fluent access and retrieval of words from memory. Although the effects of translation experience on the organization of the bilingual memory and patterns of lexical access have not been empirically investigated some opinions have been voiced which allow to tentatively assume that the bilingual memory may be reorganized to accommodate memory traces of interlingual nature (Whyatt 2006c, Paradis 2009, Tymczyńska 2011).

Presas (2000) refers to Harris’s (1977) idea of the third competence of a bilingual consisting in the ability to perform transfer operations between both languages saying that,

To carry out these transfer operations, the translator must establish *bridges* or linking mechanisms between his or her working languages. In this specific aspect, therefore, translation competence would depend on the bridges or linking mechanisms which he or she has established. I would suggest that the acquisition of translation competence consists precisely in this *reorientation* of bilingual competence towards *interlingual* competence (Presas 2000: 27).



Noticing that studies on novice translators revealed that the bridging mechanisms are initially very “rudimentary: frequently consisting of automatic 1:1 associations, almost always restricted to the lexical level” (ibid.) Presas suggests that the development of translation competence (TC) consists in improving these bridging mechanisms.

Yet, as put by Snell-Hornby (1992), the L2 learners who enter translation training programmes have to be weaned away from their associative thinking in terms of equivalent words (horizontal translation) and taken towards a more holistic view of the text and consequently of their two languages. Gile (2004) showed that “it is possible to teach students very rapidly to unlearn word-for-word, thoughtless translation and turn to analysis and reformulation, in spite of the many years spent with the language-equivalence paradigm”. “This is why the translation scholar has to be a semanticist over and above everything else. But by semanticist we mean a semanticist of the text, not just of words, structures and sentences. The key concept for the semantics of translation is textual meaning” (quoted after Bell 1991: 79). Seleskovitch (1976) insisted that in the translation process the meaning of the SL text unit has to be ‘deverbalized’, i.e., processed at the level of conceptualization and then brought down again through the process of lexical access with formulation and articulation in the target language form. This vertical route is viewed as characteristic of mature professional translators. In view of the complexity of bilingual knowledge discussed in chapter 2, cross linguistic influence and the language imbalance in most L2 learners and translators, this transformation is not a matter of a switch but a long-term process which combines intercultural competence and metalinguistic knowledge.

However, Paradis (1994, 2009) seems to have a different opinion and while referring to the hierarchical nature of the bilingual lexicon (see chapter 2) suggests that the horizontal processing does not have to be reserved for inexperienced translators. To quote,

Speakers have two translation strategies at their disposal (...). In Strategy 1, the naïve strategy, probably adopted by occasional interpreters who are used to speaking one language to one group of speakers and the other to another group, translation is accomplished via the conceptual system, according to the normal process of implicit linguistic decoding (comprehension) of the source language material followed by encoding (production) of the target language material (...) (Paradis 2009: 180).

According to Paradis this translation route is automatic in the sense that it is not consciously controlled but requires the simultaneous activation of both languages, but the activation is not to the same extent. Referring to De Groot and Christoffel's (2006) article on bilingual control in translation and simultaneous interpreting Paradis predicts that under the condition of differential activation of the two languages,

translation from stronger into the weaker language may yield the best outcome since: Comprehension is guaranteed and the target text may be adapted to the translator's proficiency by using circumlocutions and other devices, when necessary. The meaning (of the source language, correctly understood, may be accurately rendered in the weaker language, in spite of its possibly somewhat compromised morphosyntactic form (Paradis 2009: 181).

The last comment indicates that Paradis does not take into account the developmental nature of translation as a human skill which has been documented to exploit lexical links prior to conceptual connections established much later with increasing L2 proficiency. What is more, the translation direction however claimed by Paradis (1994, 2009) to be able to yield the best outcome is not in line with the generally accepted translation policy (binding in the EU translation services) according to which to ensure high quality, the translation should always proceed from the translator's weaker language (language B) into his/her stronger language (language A). This translation axiom, although still binding in theory, has recently been questioned by Pokorn (2005) who demonstrated that successful translation is possible into the translator's non-native language.

Strategy 2 called by Paradis conscious is bypassing the conceptual level and relies on direct transcoding based on "code-to-code links between the source language and the target language involving at least the lexical and syntactic level of processing" (Paradis 2009: 180 cf. Ruiz et al. 2008). Gile (2009: 240) refers to such paired expressions in L1 and L2 using the term 'Translinguistic Equivalences' and quotes De Groot and Christoffels (2006: 198) who stress that memory traces are formed and strengthen every time a given pair of translation equivalents is used. As explained by Paradis, professional simultaneous interpreters, rely on extensive metalinguistic knowledge in the form of the learned translation equivalents which they gain through their translation experience. To quote, "In this scenario translation is carried out directly via (learned) as-

sociation links between the lexicons (or any level of linguistic structure, including syntactic constructions) without going through the encoding/decoding route” (Paradis 2009: 180). Contrary to Strategy 1, Strategy 2 relies on the declarative memory which draws on the metalinguistic knowledge of learned associations between L1 and L2 forms. This observation may seem far-fetched and creates the illusion that in the development of translation as a skill we in fact first try to discourage the form-oriented translation in inexperienced translators and then come to the point where Paradis (2009) calls the conceptually mediated translation ‘naïve’ and needlessly time consuming. On the other hand, it has to be remembered that Paradis (2009) draws his views on the grounds of simultaneous interpreting and a reservation has to be made that his conclusions do not have to apply to written translation. Research into simultaneous interpreters has shown that to cope with the time pressure and mental effort management in this very specialized type of translation which can be fluently performed only by especially trained interpreters and not by accidental naïve (to use the adjective chosen by Paradis) translators accuracy might be sacrificed for fluency (Shlesinger (2000) and the ‘get on with the show’ slogan). Yet, the extent to which this is indeed the case does not have to compromise the overall conceptual content of their translation. It might be possible that the information drawn from the extralinguistic context and the pragmatic situation shared by all participants in which simultaneous interpreting is done supports the communicative function even if accuracy is sometimes secondary to fluency. As in any oral language use the participants of verbal exchanges are much more lenient in tolerating inaccurate and poorly phrased content (see Kopczyński 1994). This attitude, however is entirely unacceptable in written translation which cannot rely on the transience of the translated message and lenient attitude of those who will read the translation.

To safeguard adequate interpretation of the SL text author’s intended meaning accuracy at the conceptual level is a primary requirement for a written translator. What is more, contrary to simultaneous interpreting unless the actual translation performance is recorded for analysis written translation always results in a permanent record in the form of translated texts which can undergo critical evaluation at some point. It is therefore possible that Paradis (2009) by distinguishing the two strategies by which the mental lexicon can be accessed may imply that interpreters and translators re-organize their mental lexicons in a different way and access them

by different routes depending on the actual translation task. This possibility was also reported by Presas (2000: 25) who pointed out that “We cannot rule out the possibility that more than one of these four types [subordinate, associative, coordinate and compound organizations – BW] could be operative in any given translator, nor that one type or another could be dominant at different stages of a translator’s training process”.

As this chapter has shown natural translators process information at the conceptual level sacrificing the structural aspects, L2 learners exploit lexical links at the expense of conceptual content. A developmental shift has to occur so that in professional translation where the skill is trained neither conceptual content nor formal structural aspects are compromised. This kind of balance requires efficient cognitive control. It is likely that the progression from translation as an untrained ability to translation as a trained skill results in the functional reorganization of the translator’s bilingual memory. This assumption however, as so far lacks empirical support. Analyzing the transformations within the bilingual knowledge of a developing translator has not attracted as much interest as the search for added capacities in the process of translation skill development. Nevertheless, it is possible that if more attention is paid to the transformation within the bilingual knowledge structures as a result of translation experience many problems faced by translation trainers and trainees will be easier to understand if not overcome. Finally, this attempt to see the human ability to translate in its developmental continuity will hopefully encourage more cooperation between language learning and translator training pedagogies and practitioners.

### 3.5. Conclusions

The purpose of this chapter was to demonstrate that translation skill is built on bilingual foundations which allow bilinguals to translate without any special training. The so called natural translation is characterized by focus on content and is used as a communicative strategy which allows for interaction in multilingual communities. However, as observed by Malakoff and Hakuta (1991) natural translators (bilinguals) cannot be expected to produce a flawless translation of written texts. Natural translators who assist in intercultural communication frequently perform oral translation when formal correctness is not expected and there is a high tolerance of language interference. Functionally they are excellent communicators and there is no doubt that bilinguals are able to translate when by translation we under-

stand being able to communicate information expressed in one language in the other language of the bilingual. Written translation is more problematic and there is some evidence that the innateness hypothesis (Harris and Sherwood 1978: 155) is not enough to guarantee efficient flawless translation. Beatens Beardsmore (1982) reported cases of perfectly balanced bilinguals (see chapter 2) who while able to “function extremely well in two languages in clearly demarcated situational contexts often find it difficult to spontaneously translate between their languages without heavy interference” (Beatens Beardsmore 1982: 88).

L2 learners acting as translators exhibit another manifestation of the natural untrained ability to translate. Research focusing on the effects of translation practice, where translation is used in the modern sense of intercultural communication, shows that translation tasks have a lot to offer to L2 learners. With the changing views on language as a social construct, with the increasing number of multilingual learners who bring their own culture and their own language to their foreign language learning experience, and with recent advances in understanding bilingual knowledge which clearly point out that it is impossible to silence the L2 learner’s native language, “the time is certainly ripe for a re-evaluation of the benefits translation can bring to the process of learning a second language and its cultural context” (Witte et al. 2009: 4). Tracing the benefits L2 learners can draw from authentic translation tasks will consequently point to the major stages in the evolution of translation as a human skill, an integrative skill which can be used to enhance L2 attainment in the context of teaching and learning a foreign language. Discussing the most significant developments the experience of translation can stimulate in L2 learners and comparing L2 learners as translators to bilinguals acting as natural translators has prepared the grounds to suggest that if the translation skill is further developed, e.g., in a translation training programme or through other exposure and involvement in translation tasks there must be a qualitative shift in the development of translation as a human skill.

In this respect the authors who have investigated translation as an untrained ability of bilinguals suggest that the evolution of translation skill requires something more than bilingual knowledge and some other capacities have to be added. The discussion of translation as an untrained ability of bilinguals presented in this chapter points to some directions where these added capacities may reside. Natural translators could become professionals if they increased their metalinguistic abilities and became more meticu-

lous about the form. L2 learners to start with take the translation process the other way round and focus on form at the expense of meaning. Later through increased understanding of the nature of translation they gradually develop a more holistic sense-oriented approach to translation.

Malakoff and Hakuta (1991) suggest that translation proficiency can be viewed as “the product of an interplay between metalinguistic maturity and bilingual proficiency” (Malakoff and Hakuta 1991: 149) while translation strategies are the third factor which has the power to “enhance performance, but not beyond an *optimal-level limit* determined by the two linguistic factors” (see Fisher and Pipp 1984). Strategies however, arise only with repeated experience of translation followed by feedback which aims at better translation performance. It is when L2 learners follow the pattern of action which includes not only planning the translation task, executing it but also rehearsing the results that their ability to translate becomes transformed into a skill. Ideally, it should take place “under optimal conditions of support, experience, and feedback” (Malakoff and Hakuta 1991: 149). It is possible that the repeated experience of translation leads to a reorganization of the bilingual memory of the translator and that the bilingual person who chooses to pursue a career in translation is not only a bilingual but also an interlingual individual with *bridges* built between L1 and L2 which allow for efficient cross-linguistic lexical access. The scant research into natural translation provided a valuable insight into translation as a natural ability in bilinguals although as admitted by Malakoff and Hakuta (1991) it only “begun to scratch the surface of empirical relationships between the different abilities involved in translation”. Many questions arise. What are the cognitive consequences of being involved in a repeated experience of translation as an untrained ability for natural translators (language brokers) and for L2 learners? What are the additional capacities which develop in the course of translation skill development and how do they interact with the bilingual knowledge structures? Which aspects critically affect translation proficiency both in terms of speed and the communicative quality of translated texts?

To sum up, even the most competent and the most wanted translator of today was once an L2 learner (or a natural bilingual) and it is likely that the most successful translator in fact never ceases to see himself/herself as a language learner (Robinson 1997). However, this is not a popular view among translation scholars who prefer to view translation as a special skill reserved for professionals (Newson in Malmkjaer 1998). In this re-

spect Translation Studies as a discipline are not without blame for the lack of interest at the early stages of development of translation as a human skill. With the first call for papers from the University of Bologna, the organizers of The First International Conference on Non-professional Interpreting and Translation scheduled for 2012 the tide may be changing. As expressed by the organizers,

the aim of the conference is to provide a forum for discussion in a relatively recent and often neglected field of language and cultural mediation. Despite being a hugely spread and submerged practice, non-professional interpreting and translation has always been the poor relative of both interpreting and translation studies and, as such, neglected and under-researched by academia and condemned by professional categories<sup>5</sup>

Perhaps finally hopes might be raised that TS will become an all-inclusive discipline to study all forms and facets of translation, not exclusive to professional translation and ready to investigate the continuity of translation expertise development. It is possible that it is at this non-professional stage that an important shift in the skill occurs which includes a transition from the lexical to textual level in the learner's understanding of meaning. This is also a stage when major changes occur in the learner's view of language as a tool in intercultural communication which makes it necessary to include the cultural information encoded in languages. This progression on the developmental continuum of translation as a skill is believed to be a part and parcel of every translator. Depending on the individual language acquisition history, L2 learners who choose to pursue a translation career can be already equipped with some additional capacities including intercultural awareness and metalinguistic abilities which will strengthen the bilingual foundations and prepare the ground for their future translation competence and translation expertise. Others, who choose to pursue a career in translation following their intuition rather than past educational experience of translation will have to acquire these abilities in a translator training programme or by other means (e.g., self-coaching, mentoring, internship in translation agencies, etc.). Those who will not intentionally and consciously seek to further their translation ability past their natural untrained capacity will remain natural translators.

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<sup>5</sup> (<http://npit1.sitlec.unibo.it/>).

Can one then say after Klaudy's (2003: 133) that "translator training starts where foreign language teaching ends"? In view of the analysis of natural translation abilities presented in this chapter as well as with respect to the current views on bilingual knowledge, there seems to be no clear cut boundary between translation proficiency and language proficiency. Quite on the contrary, both proficiencies seem to complement each other and feed on each other (Whyatt 2008). Consequently the relationship holding between them is that of mutual benefit. Chapter 4 will look at translation as a trained skill of those who want to provide translation services as professional translators and therefore intentionally and consciously seek to acquire translation competence.



## Chapter 4

*It has been by translating professionally that I myself  
have learned (and continue to learn) how to translate  
Kiraly (2000: 8)*

### Developing translation competence

The purpose of this chapter is to look at translation as a trained skill in those bilingual language users who aspire to take up translation as their professional career. It is assumed that the development of translation as a trained skill is a conscious choice of career which like in any other profession requires professional competence with all the necessary skills and knowledge needed to provide professional translation services. Questions which arise especially from the perspective of the L2 learner and an aspiring translator include: What do I need to add to my bilingual knowledge and the intercultural and metalinguistic awareness that I have already started to acquire to become a professional translator? It turns out however that, “[t]he literature on Translation Studies lacks a consistent description of the abilities and skills required from a professional translator” (Alves et al 2001: 46-47, see also Shreve 1997: 121, Orozco 2000: 199). In the sections below an attempt is made to review different approaches to translation competence (TC) in order to gather some guidelines on how to best structure the learning environment in which the natural ability to translate can evolve into a sophisticated repertoire of translation as a professional expert skill. Finally, some attention is paid to translation as a profession with its requirements and market demands in order to elicit the background for the course of evolution of the translator’s professional self.

#### 4.1. Translation competence

Despite Bell’s (1991) appeal that translation theory should account for the process which is required to produce a translation as well as the abilities and skills necessary to perform the task, scholars are divided

on their view of translation competence<sup>1</sup> (TC). As expressed by the PACTE (Process in the Acquisition of Translation Competence and Evaluation) research group, “[u]nlike other disciplines in which numerous studies have been carried out to determine what constitutes expert knowledge in the field and how this knowledge is acquired, no generally accepted model of translation competence exists in the field of Translation Studies” (PACTE 2003: 46). Pym (2003) provides a review of different attempts to define translation competence with a conclusion that the changing perspective on how to define the term runs parallel to the evolution of Translation Studies as a scholarly discipline. The attitudes displayed by various scholars can be divided into three perspectives: the additive perspective, the componential perspective and the holistic perspective. Let us follow Pym’s review from these three stands looking at each of them with the eyes of a novice translator. A novice according to Hoffman (1997: 200) is no longer a ‘naïve’ (i.e., somebody completely ignorant of the domain), but an apprentice (meaning the one who is learning preferably under the eye of a master or a trainer) self-motivated to acquire all the necessary skills and knowledge.

#### 4.1.1. The additive perspective on TC

The point that the human skill to translate must include something more than linguistic competence in the two languages was made in chapter three. Toury (1995: 246) considered it essential that bilingual knowledge has to be supplemented by the ability to establish similarities and differences across languages which he branded interlingualism and which probably is a part of one’s metalinguistic and metacognitive abilities rather than a function of their linguistic competence. These “added capacities are inherently different in different people, part of different mental structures” (Toury 1995: 248) and they are probably influenced by one’s language acquisition history. Toury (1995) maintained that they are “trainable at least up to a point” through practice in translating in context combined with ‘environmental feedback’, that is translation product analysis and assessment in the educational translator training

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<sup>1</sup> Shreve and Angelone (2010: 4) note that the notion of translation competence is in fact an adaptation from Chomskyan linguistics and the many attempts to define it did not refer to cognitive concepts of long term memory, schemas or declarative knowledge.

context. This added capacity was branded as transfer competence and suggested that a kind of bridge, an easy passage between the two languages has to be built in the mind of the translator. Presas (2000) suggests a more evolutionary perspective which takes into account the existing bilingual knowledge and says that the acquisition of translation competence consists in “*reorientation* of bilingual competence towards *interlingual* competence” (Presas 2000: 27). A bilingual speaker to carry out translations viewed as ‘transfer operations’ has to establish “bridges or linking mechanisms” between both working languages. However, since the translation process research showed that the transfer mechanisms of novice translators are highly rudimentary (see chapter 3) relying on automatic lexical associations between L1 and L2, Presas sees the development of TC consisting in “the improvement of these bridging mechanisms”. Although the idea as such is very interesting, it remains a theoretical notion and awaits empirical support. The most important question is the level at which these interlingual bridges are being created. Are they built at the conceptual level or at the lexical level and how do they respond to the dynamic nature of meaning. Is there any empirical evidence that as a consequence of building these linkages between the two working languages there is a qualitative and quantitative difference in lexical access as compared to a bilingual who does not seek to master the skill of translation? If this is the case then, a third language mode (see Grosjean 2001), the interlingual mode in language use would have to be recognized. This would imply that translation is not an extreme form of bilingualism (Paradis 2005: 412) but that we are in fact talking about the emergence of an interlingual individual (Whyatt 2009c) and interlingualism in Toury’s (1995) sense is the added capacity, a result of transformation within the bilingual foundations of translation competence.

Another doubt arises, however, stemming from the fact that every translation task is in a way a novel experience, as it involves a new SL text, new audience, perhaps new text type, and a translator who, although is physically the same person, is different because of being enriched by his/her most recent translation experience. In this situation the bridges and the linking mechanisms become re-negotiated and therefore cannot be viewed as static linking mechanisms but have to be re-set with every new translation task. This is an issue that I will come back to in

more detail in chapter five. Nevertheless, the term transfer<sup>2</sup> competence as added capacity to enable translation has had many followers who saw it as a feature which is distinctive from bilingual competence but which involves the ability to code-switch and the metaphor of building bridges while changing codes seemed appealing. Still in the late 1980s translation competence was defined as “the ability to put together [verbinden] the linguistic competences gained in two languages” (Koller 1979: 40), or “as a summation of tongues” (Pym 2003). A view which was criticized (Pym 2003) and its rejection was confirmed by TAP research pointing to the fact that even bilingual knowledge at a high level of L2 proficiency does not guarantee translation competence.

Wilss (1976) for example suggested that translation competence should be “clearly marked off the four monolingual skills: listening, speaking, reading and writing” and viewed as ‘supercompetence’ (Wilss 1976: 120). Disregarding what would now be considered as a non-PC term, many TS scholars started to add other sub-competences to the ‘supercompetence’ of translation. In effect it was assumed that translation competence is more than a summation of language knowledge.

Koller (1992) claimed that TC is “not simply more language competence [...] but also the creativity involved in finding and selecting between equivalents and in the increasingly necessary [skill of] text production” (Koller 1992: 20 quoted after Pym 2003). Snell-Hornby (1992) pointed to the need to develop a holistic approach to texts and incorporate cultural contexts which novice translators find very problematic. *Skopostheorie* (Reiss and Vermeer 1984) stressed the awareness of function and text type as an important part of translation competence. In effect the list of added capacities which should be included in TC seemed to endlessly grow.

Bell (1991) offers a relevant illustration in the form of a long list of knowledge components where TC is viewed as the sum of the following items: “Target-language knowledge, text-type knowledge, source-language knowledge, subject area (‘real world’) knowledge, contrastive knowledge, then decoding and encoding skills summarized as “communicative competence” (covering grammar, sociolinguistics and discourse)” (for more proposals of what TC should include see Pym 2003). One can hardly imagine

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<sup>2</sup> Note the disharmony between the use of the word transfer in the term transfer competence in TS and the use of the word transfer (i.e. negative transfer) in SLA theories and in Cross Linguistic research.

something more intimidating to a novice translator than being provided with such an extensive list of requirements (see Korzeniowska and Kuhiwczak 1994). This is not everything, though and TC should also include, apart from the sum of all possible kinds of declarative and procedural knowledge, the “knowledge of translation processes” as pointed out by Wilss (1988).

Some scholars, especially those involved in TAP research claimed that the term ‘TC’ should be abandoned as non-definable (Lörscher 1991). Schäffner and Adab (2000) in their introduction to *Developing Translation Competence* explicitly surrendered saying that, “competence” involves any number of other terms and thus can be used as “a cover term and summative concept of the overall performance ability which seems so difficult to define” (Schäffner and Adab 2000: x). Pym (2003) responds to this suggestion saying that it involves a paradoxical reduction of TC to performance ability (compare Chomsky’s (1965) competence-performance divide). In terms of pedagogical implications such a definition is far more deficient than the componential view of TC which runs in parallel to the additive perspective and which most probably was an attempt to organize all the suggested components into what should ideally be included under the heading TC that makes it unique, different from language competence and makes its acquisition possible.

#### 4.1.2. The Componential perspective on TC

According to Pym (2003) the perception of TC as a multi-componential cluster concept was a reaction to the break of TS from linguistics and its orientation as an interdisciplinary field of research. One could also suggest that it is a result of the increasing awareness of translation as a process and translation as a complex skill. Researchers working in the PACTE group noted that the additive perspective also shows the bias of individual researchers (House 1986, Bell 1991, Nord 1991, Pym 1993, Kiraly 1997, Hatim and Mason 1997, Risku 1998, Presas 2000) and as such is “limited in scope as they deal only with limited aspects of translation competence”. What is more and far worse though, is that most of the additive definitions of TC (as something more than language competence) are prescriptive rather than descriptive, based on what is expected of a translator as a professional rather than on the basis of structured research projects with clear methodology and empirical rigour. In this respect all the definitions of translation competence and models lack empirical support and

ecological validity not to mention statistical significance. As the PACTE group observes, “As far as we know, only two studies have attempted an empirical approach to research into translation competence as a whole”: Lowe (1987) and Stansfield, Scott and Kenyon (1992) and even these as pointed out by Orozco (2000: 113) cannot be generalized because of the small number of subjects they studied. As a consequence, listing the components of TC is nothing more than chasing the unknown ideal which given the structure of our mental lexicon can look quite different in different people. What is needed is empirical research to gather ecologically valid data in order to describe the components of TC and to establish the connections and hierarchies between them. This is precisely what the PACTE group aims at (PACTE 2003: 47).

TC is viewed as expert knowledge needed to solve problems and make decisions to achieve the communicative aim of translation which is perceived as a communicative activity. The holistic model of TC decomposed into several sub-competences has been developed and re-defined since 1998 by the PACTE group. The researchers draw insights from several sources which include: research in other disciplines such as psychology, pedagogy, language teaching which define notions such as “expert knowledge”, “competence” and “learning processes” as well as the models used to define TC in TS (see Orozco and Hurtado Albir 2002). The basic premises of the 1998 model include the following points:

1. Translation competence is the underlying system of knowledge needed to translate;
2. Translation competence is qualitatively different from bilingual competence;
3. Translation competence is an expert knowledge and, like all expert knowledge, comprises declarative and procedural knowledge; the latter is predominant;
4. Translation competence is made up of a system of sub-competencies;
5. The sub-competencies of translation competence are considered to be: a language sub-competence in two languages; an extra-linguistic sub-competence; an instrumental or professional sub-competence; a psycho-physiological sub-competence; a transfer sub-competence, and a strategic sub-competence;
6. All the sub-competences are inter-related, hierarchical and their relationships are subject to variations (PACTE 2003: 47-48).

Although the division into the 6 sub-competences seems plausible their description offered by the authors suggests that it is difficult to single out all the pockets of knowledge included in each of them. For example, language sub-competence was defined as “the underlying system of knowledge and abilities necessary for linguistic communication in both languages”. There is no mention however of metalinguistic abilities unless they are simply taken for granted. The extra-linguistic sub-competence includes “implicit or explicit knowledge about the world in general and specific areas of knowledge” including: knowledge about translation (its ruling premises: types of translation unit, the processes required, etc.), bicultural knowledge, encyclopedic knowledge and subject knowledge. The one question which immediately arises is why ‘knowledge about translation’ is not included in the third instrumental/professional component which includes: knowledge and abilities associated with the practice of professional translation such as the skill and knowledge of documentation, use of tools and modern technologies, knowledge of the professional market and the profession (prices, types of briefs, etc). The transfer sub-competence is, to quote, “the central competence that integrates all the others. It was defined as the ability to complete the transfer process from the source text to the target text, that is to understand the source text and re-express it in the target language, taking into account the purpose of the translation and the characteristics of the receptor” (PACTE 2003: 48). Although the transfer competence (which is nothing new in TS) is considered central, it is the strategic sub-competence which “plays an essential role in relation to all the others, because it is used to detect problems, take decisions, and make up for errors or weaknesses in the other sub-competences” (ibid.). This implies that it is in fact the central sub-competence although this role has already been ascribed to the transfer competence (as quoted above). Yet, the most ill-defined sub-competence is the psycho-physiological sub-competence defined briefly and vaguely as, “the ability to use psychomotor, cognitive and attitudinal resources”.

The researchers involved in the PACTE research group realized themselves that there were some shortcomings and confusions of the componential view of translation competence published in 2000 and re-assessed them in 2003. Although the model of TC is still open to reconceptualization, its major outline was presented in the 2003 publication entitled, “Building a translation competence model”.

Most notable changes consisted of:

1. Getting rid of the transfer sub-competence but instead including it in the definition of translation competence which now is defined as, “the underlying system of knowledge needed to translate. It includes declarative and procedural knowledge, but the procedural knowledge is predominant. It consists of the ability to carry out the transfer process from the comprehension of the source text to the re-expression of the target text, taking into account the purpose of the translation and the characteristics of the target text readers” (PACTE 2003: 58);
2. Replacing language sub-competence by bilingual sub-competence and defining it as “predominantly procedural knowledge needed to communicate in two languages”. This requirement is already questioned by the existing knowledge about bilingualism (see chapter 2) as it would only refer to natural bilinguals who however as pointed out by Grosjean 2002, Nida 2000, and others, are not the best material for professional translators since translation involves the need to keep the two languages of a bilingual consciously apart. The further comment that the bilingual sub-competence should include the “specific feature of interference control when alternating between the two languages” is very much welcome but it has to be also admitted that the conscious control of interference means that one has to consciously monitor ones linguistic output employing metalinguistic knowledge which is declarative and not procedural (see Paradis 2009). A similar welcome expansion of the bilingual sub-competence is made in the 2003 publication, to include communicative rather than language competence marked by reference to pragmatic, socio-cultural aspects of language use as well as grammatical and lexical knowledge of the two languages;
3. Other changes introduced to the 1998 model of TC included shifting the knowledge about the translation processes component to the instrumental/professional rather than extra-linguistic sub-competence;
4. The strategic sub-competence after getting rid of the transfer sub-competence was granted a crucial role in TC since it performs central executive roles and is used to: “plan the translation project; activate, monitor and compensate for shortcomings in other translation sub-competencies; detect translation problems; apply translation strategies; monitor and evaluate both the translation process and the partial results obtained in relation to the intended target text, etc.” (PACTE 2003: 57);



5. Finally, the previously introduced psycho-physiological sub-competence was redefined as psycho-physiological ‘components’ on account that “it forms an integral part of all expert knowledge” (PACTE 2003: 57). The change though is rather controversial. First, there is not much room left for development if something is called components. Secondly, the psycho-physiological sub-competence carried some hope that translation competence will finally be humanized and see the translator as a developing human expert in the skill of translation who does not only have to possess the five sub-competences but is actively involved in the integrated use of all the knowledge needed for a specific task.

To sum up, as compared with the other sub-competences the largest expansion of the elements took place in the bilingual sub-competence which resulted in explicit importance granted to the previously left out issues of language interference and language control involved in language use for the purpose of translation. Since the changes to the 1998 model were achieved in the process of empirical studies which used a number of research tools such as questionnaires, observation sheets, PROXY<sup>3</sup>, and retrospective think aloud protocols, the refinement introduced in the bilingual sub-competence allows to assume that the bilingual competence is the first to undergo major transformations as the result of translation experience aimed at acquiring translation competence. This aspect was raised by Toury (1995) in his interlingualism postulate and by Presas (2000) in her interlingual bridges metaphor and seems relevant in view of the dynamic nature of bilingual knowledge discussed in detail in chapter 2.

The revised model of translation competence can be graphically represented in the following way:

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<sup>3</sup> A computer programme similar to Camtasia used to record the data flow between the computer user and the Internet pages which are consulted during the translation process.

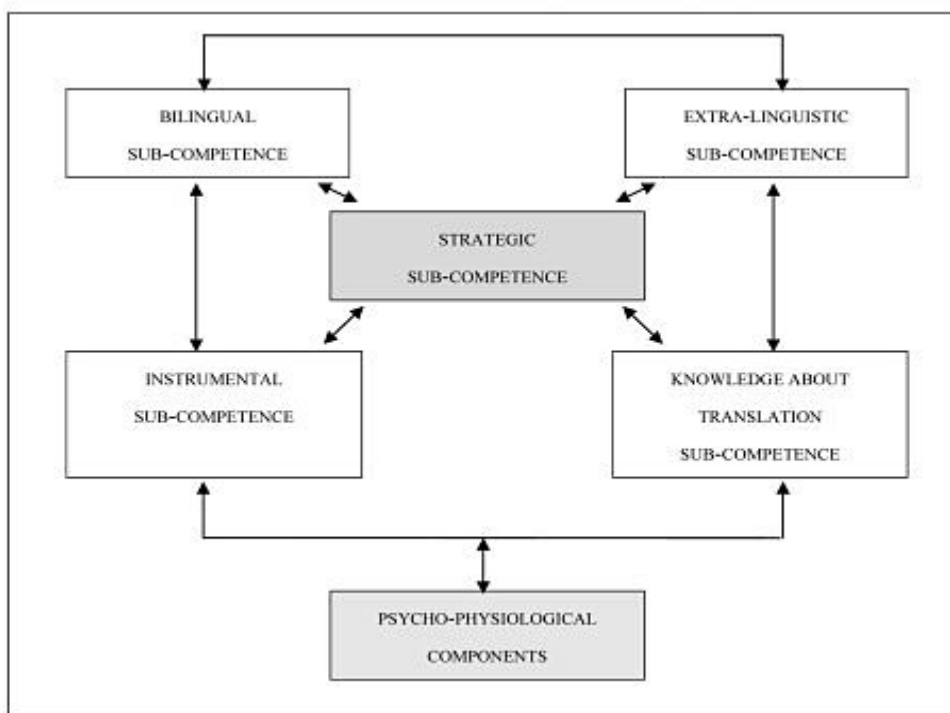


Fig. 1. Model of translation competence revisited.<sup>4</sup>

The authors (PACTE 2003: 60) themselves admit that the model is open to modification and the major purpose of the extensive research project is to expand our knowledge “about how translation competence functions and how it is acquired” (PACTE 2003: 61). This will inform the translator training programmes and will hopefully lead to better curricula design (see Kearns 2006). However, the attempt to decompose translation competence is not approved by some translation scholars who prefer to see TC as just one thing (Pym 2003).

<sup>4</sup> The EMT (European Master’s in Translation) expert group set up in April 2007 by the EU to make specific proposals with a view to implementing a European reference framework for a Master’s in translation also took a compositional approach and suggested 6 areas of competence: translation service provision competence, language competence, intercultural competence, information mining competence, thematic competence and technological competence (<http://ec.europa.eu/emt>).

#### 4.1.3. The holistic perspective on TC

A list of shortcomings of the componential perspective on TC according to Waddington (2000: 135) includes the following factors:

1. it is hard to know how many components should be a part of translation competence;
2. the definitions tend to concern ideal competence, and are thus incomplete without a model of the learning process (cf. Toury 1995: 238);
3. there is a dearth of empirical evidence for most of the available models (quoted after Pym 2003: 487).

Pym adds another shortcoming of the componential models of TC which includes heavy assumptions not just about what translation is and how it should be taught, but about the level at which specific teaching is needed, and for how many years. These assumptions according to Pym reflect the researchers' bias exerted by their institutions for which they work and which offer curricula design according to their own perceptions of translation and an ideal translator who should know "A, B and C". To quote, "Multicomponentiality has undoubtedly followed the fragmentary development of the profession; it is obviously a response to interdisciplinarity and the break with linguistics; but institutionally it operates as a political defense of a certain model of translator training. And that model is not the only one, nor necessarily the best" (Pym 2003: 487). Pym (2003) refers here to the Spanish system of translator training which divided language teaching from translator training following the trend in the 1980s and 1990s urging for the discontinuity of translator training from language learning at tertiary level in some countries. Advocated by renown scholars including Snell-Hornby (1994) it did lead to "cutting the umbilical cord" (Snell-Hornby 1994: 433) with Modern Language Departments in Spain, the country where the PACTE group is based. Pym explains their professional bias in the following words: "Now, once that battle was won (in Spain in 1991), many of the independent translation schools then had to fill up their four- or five-year programs. As we have seen, those institutions had a direct interest in multicomponentiality" (Pym 2003: 492).

Rejecting the multicomponential perspective on TC, Pym suggests returning to the concept of transfer competence initially suggested by Toury (1984, 1995), Krings (1986b), Koller (1992) which in line with Wilss

(1976: 120) becomes a kind of “supercompetence” that explains the “singular specificity of translation” (Pym 2003: 488). To quote, “the minimalist “supercompetence” approach means accepting that there is no neat definition of all the things that translators need to know and will be called upon to do. Nor is there any reason to suppose that competence is at all systematic, like the grammatical and phonological rules that once provided the term with its archetypal content. What we need, beyond lists and systems, is a concept that might define translating and nothing but translating. Only then could we orient the rest” (Pym 2003: 488).

In the minimalist definition of TC Pym (2003) refers to his earlier writings which located the development of two-fold functional competence<sup>5</sup> in translator trainees described as “The ability to generate a series of more than one viable target text (TT1, TT2 ... TTn) for a pertinent source text (ST); The ability to select only one viable TT from this series, quickly and with justified confidence”. As put by Pym (2003) the union of these two skills concerns translation and nothing but translation although he admits “there can be no doubt that translators need to know a fair amount of grammar, rhetoric, terminology, computer skills, Internet savvy, world knowledge, teamwork cooperation, strategies for getting paid correctly, and the rest, but the specifically translational part of their practice is strictly neither linguistic nor solely commercial. It is a process of generation and selection, a problem-solving process that often occurs with apparent automatism” (Pym 2003: 489). Looking at these text generating and text selecting abilities however, its exclusiveness to translation is mistaken. In creative writing one also generates and selects from many versions. Another drawback of the minimalist definition of the translation competence offered by Pym is the lack of reference to the position from which TC is viewed. Traditionally TC defined as the underlying knowledge needed to translate assumes the ideal in line with the use of the term in linguistics (Chomsky 1965), that is the state of the knowledge ascribed to the idealized professional translator which would provide a point of reference for translator training methodologies. It seems that Pym does not see TC as an idealization but blurs the line with the translation performance of a professional translator. Yet, as Pym observes himself “competence cannot be confused with questions of profes-

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<sup>5</sup> Note the term ‘functional competence’ which seems in opposition to the traditional account of competence (the underlying knowledge) vs. performance (manifestation of competence in action).

sional qualifications, no matter how teachers like myself might worry about training students for the workplace” (Pym 2003: 482)<sup>6</sup>. Still, it is unlikely that the view of TC as the ability (see the discussion of confusing the terms: ability, skill, competence in chapter 1) to generate more than one viable target text and the ability to select just one with confidence is that taken by the professional translator at work. The only perspective in which this view of TC could apply is the initial stages of translator training when these two abilities are stressed and practiced. What is more, translation as any other instance of language use is a process of choosing between viable alternatives, this need to choose is not exclusive to translation at all and neither is ‘what drives generation and selection of optional expressions referred by Pym as: “that kind of reductive reasoning, impeccably pragmatic, [which] is perhaps the hardest part of translation competence to convey” (Pym 2003: 490). Although the justification offered by Pym (that the major virtues of the willfully minimalist definition lie in things it does not say) might be intellectually interesting, it is vastly unhelpful in informing aspiring translators about the knowledge base they need to acquire and which will serve them in their future professional life as a translator.

However, in his defense of the minimalist definition of translation competence Pym (2003) points to the fact that although the minimalist view of TC does not indicate that there is an ideal translator profile it allows for other competencies to join in to the effect that the translation competence might become a “minor component in the range of skills required of intercultural professionals” (Pym 2003: 491). In recognizing that translators in fact require multicompetence (Gouadec 2007) Pym actually echoes the PACTE’s view of expert knowledge which implies multicompetence. In view of the minimalist understated complexity both attitudes to TC the multicomponential one and the minimalist one do not have to be seen as mutually exclusive but they might just look at translation competence from a different perspective. PACTE is looking at it from the perspective of the translator trainer and the minimalist approach is taken from the perspective of the professional translator. As it can be expected the views taken from such different vantage points will differ. The translator trainer is aware of the fact that the beginning, novice translators

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<sup>6</sup> The EMT expert group define competence as “the combination of aptitudes, knowledge, behaviours and know-how necessary to carry out a given task under given conditions” (<http://ec.europa.eu/emt>).

cannot see the forest for the trees when with possibly limited bilingual knowledge they embark on a translation course. To be weaned away (Snell-Hornby's term 1992) from their natural translation strategies (described in chapter 3), it is best to show them all the knowledge components that participate in the translation process. The minimalist approach would apply to the professional experienced translator who having gone through the forest himself/herself maybe, quite a long time ago, can no longer see the trees, which here are a metaphor for the hurdles every individual novice translator has to surpass to integrate all the kinds of knowledge which participate in the process of producing a translation. The developmental perspective in which the translator is viewed in this work points to an obvious fact that it is only after getting through the forest and negotiating the passage through the trees that it is finally possible to appreciate the view of the forest, i.e., TC in its orchestrated entirety<sup>7</sup>.

To sum up, translation scholars disagree as to what should be included in the definition of translation competence to the point that some might suggest that in fact such a definition is not needed. Since the tasks performed by translators change with the market demands, the definition of translation competence would have to be anyway constantly revised to keep up with the growing demands placed on the work expected of translators (see Pym 2003). Fraser (2000: 53) explicitly admits that TC is used "as shorthand for the skills, expertise and judgment that a professional translator develops from a combination of theoretical training and practical experience". Needless to say TC used in this sense remains intangible in terms of the actual contents. Having shown the lack of unanimous agreement as to what constitutes TC it is equally regrettable that despite the long history of translation practice and the constantly growing demand for translation services the process of translation competence acquisition has not been a frequent object of empirically validated research (see Cronin 2005). "If few studies of translation competence exist, there are even fewer of translation competence acquisition" (PACTE 2003: 49). Let us now examine what is available in the literature that could be used to provide guidance to novice translators starting their developmental route towards translation as a trained skill performed by a professional translator.

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<sup>7</sup> Compare the progression from unconscious incompetence to conscious incompetence to conscious competence and finally to unconscious competence (González Davies 2004).

## 4.2. Acquiring translation competence

Although there have been some empirical studies comparing the translation performance of students (from modern language departments and from translation training programmes) and professional translators with the conclusion that both groups differ in terms of how they approach the task (Jääskeläinen 1989, Tirkkonen-Condit 1990, Jääskeläinen and Tirkkonen-Condit 1991), no attempt (at least to my knowledge) has been made to follow up the development of translation competence in a longitudinal study (however some research projects have been set up, e.g., Orozco and Hurtado Albir 2002, PACTE 2003). “It is generally assumed that students develop translation competence through their studies on translation. However, nobody has yet defined the process through which students acquire translation competence” (Orozco and Hurtado Albir 2002). Several researchers especially those who are actively involved in translator training (Kusmaul 1995, Kiraly 1995, 2004, 2005, Cronin 2005, Seguinot 1997, Gile 1995, Hansen 2006) have made some proposals which although fragmentary can be used to stake out the route along which the untrained ability to translate (discussed in chapter 3) develops into a trained skill with its underlying translation competence.

### 4.2.1. Some suggestion of how TC can be acquired

The PACTE group defines translation competence acquisition as:

1. A dynamic, spiral process that, like all learning processes viewed from a cognitive perspective evolves from novice knowledge (pre-translation competence, i.e., natural ability to translate discussed in chapter 3) to expert knowledge (translation competence); it requires learning competence (learning strategies) and during the process both declarative and procedural types of knowledge are integrated, developed and restructured;
2. A process in which the development of procedural knowledge and, consequently, of the strategic sub-competence are essential;
3. A process in which the translation competence sub-competencies are developed and restructured (PACTE 2003: 49-50).

Several reservations are made which allow for relations, hierarchies and variations in the process of acquiring sub-competencies. They include the following points: 1) the sub-competences are inter-related and compensate for each other; 2) do not have to develop in parallel; 3) are organized hierarchically; 4) variations occur in relation to translation direction (direct or inverse), language combinations (languages which do not share the same script, e.g., English and Chinese), specialization (legal translation) and the learning context (formal training, self-learning). A reservation is made that the learning context and the teaching methodologies will directly influence the acquisition process, something that was acknowledged a long time ago in SLA research (see chapter 2 on the relations between the teaching methods and the mental lexicon structure).

All the points seem relevant, but what is missing is the description of novice knowledge, explained here as pre-translation competence. If we assume that learning new skills and knowledge, e.g., in the process of TC acquisition “is a dynamic process of building new knowledge on the basis of the old. What may be most important in the process is the restructuring of existing knowledge, rather than acquisition of new information” (PACTE 2000: 103). Therefore, defining what is the assumed nature of pre-translation competence is essential. A complete novice to translation will have only bilingual knowledge to rely upon and extralinguistic sub-competence. As I pointed out in chapter two the bilingual foundations of translation competence are complex. Bearing in mind the difficulties in describing TC as expert knowledge in the previous section, it might be easier to make some assumptions which can always be questioned but which nevertheless will provide some points of reference.

Let us then assume that the novice translator is in fact an L2 learner. Since I described the way L2 learners translate in chapter three, let me here refer to Presas (2000: 29) who views the development of translation competence as consisting of three basic learning processes: “(1) the acquisition of previously non-existent competences; (2) the restructuring of already existing competences in order to facilitate transfer competence; (3) the acquisition of strategic competence” (Presas 2000: 29). Within the transfer competence Presas points to the following psycholinguistic processes which have to take place when the reorientation of bilingual competence towards interlingual competence occurs: “(1) specializing in communicative competence in two languages (oral or written, reception or production); (2) restructuring, reorienting and broadening mechanisms of



code switching and bilingual memory; (3) integrating the mechanism to control interference” (Presas 2000: 29). Suggestions made by Presas (2000) are very much in line with the PACTE proposal, and although neither Presas nor the PACTE group refer to one another in an explicit way, they both imply that the fundamental restructuring in the process of TCA (translation competence acquisition) takes place within the bilingual sub-competence. It is possible that the experience of translation combined with feedback received from translation trainers has the power to transform the bilingual competence into an interlingual competence (see chapter 3). It is something that was suggested by Toury (1995) in his chapter entitled “A bilingual speaker becomes a translator” and ascribed to the social motivation behind the development of translation skill and the social function of translation as a final product (Toury 1995: 148). As I suggested in chapter 3 this transformation is marked by awakening or augmenting the novice translator’s awareness of intercultural and metalinguistic aspects involved in the act of translating. Similarly, Kiraly (1995: 101) in his *Pathways to Translation* talks about the need to emphasize the acquisition of interlingual, intercultural and intertextual associations in translation trainees.

This reorientation of bilingual competence to include the interlingual route of access to both languages in the mind of a beginning translator instigated a debate on whether the acquisition of translation competence facilitated by formal translator training should be altogether separated from L2 teaching and learning (Snell-Hornby 1992: 433). Some countries, e.g., Spain, employed the postulate of total separation between translator training and L2 teaching and learning as if denying the continuity of translation skill development. The outcome experiences have shown that the separation goes against the evolutionary nature of translation as a human skill which has to be built on bilingual foundations. Translation competence and bilingual knowledge remain in an active mutually beneficial symbiosis. Indeed, to quote Pym (2003),

Suddenly there was no pressing need to separate translation from bilingualism, for example, just as there was little interest in the idea of separate professional communities. It could all be brought under the one roof; it would all be part of “translation competence.” In this sense strategic importance should be placed on attempts to define the special ways in which not only translation should be taught, but also the way languages should be taught for translators (cf. the “pre-translation com-

petence" outlined in Presas 1998). The discontinuity that was once sought by virtually all translation scholars has now become a rather thin and very debatable line (Pym 2003: 492).

It is precisely then that the importance of bilingual foundations was in fact recognized as encompassing what Presas (2000) called 'pre-translation competence'. The above view points to the shared interest between modern language departments and translation training programmes which lies in educating L2 language experts who will use their L2 expertise for various purposes, and translation is then to be seen as a specialization of L2 expertise. As pointed out in chapter 1 and 2 both areas, bilingual knowledge and translation competence benefit from translation experience.

Focusing on the specialization of bilingual skills in the process of TC acquisition it seems plausible to suggest that the beginning translators have to become interlingual language users and as such they have to develop certain mechanisms which will allow them to control their language use (Green 1993). In other words they have to restructure their bilingual knowledge to become conscious language users of their L1 and L2. Presas (2000: 29) mentioned restructuring, reorienting and broadening mechanisms of code switching and bilingual memory and integrating the mechanism to control interference. This implies that an additional competence (i.e., the 'super-competence' suggested by Wilss 1976) needs to be developed in the process of re-orientation from bilingual language use to interlingual use in translation. Kiraly (1995: 101), relying on cognitive and psycholinguistic approaches to translation, suggests that attention should be paid to cognitive resources that translation students need to acquire. As observed by Shreve (1997: 124), "The cognitive basis of professional translation may derive from cognitive skills shared with bilinguals, but we must make the case that other cognitive structures have been added and that a variety of specific transformations of the knowledge of translation and of how to translate occur if and when an individual embarks on a course of acquiring language experiences of a certain type, for instance, translation experience". Similar, Martin (2006) pointed out that the beginning of translation competence acquisition starts with enrolment into translator training programmes where primarily students develop a deeper understanding of translation as an activity and as a mental process. Research involving L2 learners with wider translation experience (Whyatt 2007b) or translation trainees (Kussmaul 1995) showed that increased understanding of the translation process gained

through repeated translation practice (professional sub-competence) had a positive effect towards translation performance. In a similar vein Orozco (2000: 201) who defines the aim of her research as “to shed new light on the whole process of acquisition of translation-specific skills and abilities, as a necessary step in finding an effective translation teaching methodology that will guide trainee translators in their learning process” suggests that the changing notions about translation in the translation students are an index of their progress in terms of translation competence.

In PACTE’s view students who start to specialize in translation come to acquire a range of sub-competences (discussed above) in the sense that they are instructed or guided to discover what aspects of the translation process are also important and have to be incorporated in their use of bilingual knowledge for the purpose of translation. In a way their meta-cognitive awareness of the translation process and its social function starts to develop. In PACTE’s estimation (2000) however, the novice stage of TC acquisition “could be defined as the stage when the sub-competences have been acquired, at least partially, but they do not interact with each other” (PACTE 2000: 103), that is they are not integrated into an efficient cooperating network of knowledge and skills. González Davies would probably suggest that the novice stage can be described as the state of conscious incompetence as the students first become aware of what they still do not know. Whyatt (2007b) quoted some comments expressed by novice translators showing their disappointment that although they knew both languages they felt let down by their knowledge when translating. The comments included the following:

“I had tremendous problems recalling words from memory”

“my knowledge of the FL is not sufficient to translate”

“I spent so much time on using dictionaries”

“dictionaries do not always help”

“I thought I knew my own language but I had so many doubts”

“I thought I knew this word but it meant something else”

“translation is such a slow tedious process I could never make a living out of it”

From this depressive start when the students’ linguistic confidence is a bit shattered there is a gradual process of learning to awaken their self-awareness and eventually build their self-confidence as translators. In a

way their initial disappointment with the fact that having the knowledge of the two languages they still experience difficulties when using them for the purpose of translation reflects the common naïve view that everybody who knows two languages can translate (see Hejwowski 2004). This widespread opinion clashes with the students' translation performance and as a result they start to develop a new set of skills (Whyatt 2007b). As I pointed out in chapter 3 the experience of translation leads to an increased understanding of its nature and purpose and as a result it brings about a transformation within the bilingual competence of advanced L2 learners at university level. The transformation (discussed in chapter 3) includes intercultural awareness underlying languages and metalinguistic awareness which might prove to be a pre-cursor of strategic competence which in competent translators encompasses the entire translatorial action (see Holz Mänttari 1984). Thus, the assumption that in novice translators the progression on the translation competence scale entails a dynamic interaction between the sub-competences until the hierarchy suggested by PACTE is established with strategic sub-competence holding responsibility for the entire process and product of translation seems plausible. What is still missing is a change of perspective to see the progression in translation as a trained skill from the point of view of the actual trainee who comes to understand the nature of the translation process perceived as a communicative social action and who gradually experiences the transformation within himself/herself.

Although scholars differ on how TC is best defined they all agree that translation competence is experience-derived knowledge. Examining the links between TC and the experience of translating might shed some more light on the evolution of translation as a human skill to reach a professional level.

#### 4.2.2. The correlation between TC and translation experience

(Shreve 1997: 127) points to the fact that “individuals who practice translation professionally have developed their ability to do so deliberately and in the process of the deliberately sought language experience of translating”. This observation points to two factors involved in the process of learning to translate: the learning person and the learning environment. Shreve (1997: 127) also points to the fact that the experience of translating can be acquired in several ways including translation schools, or “by

receiving mentoring from another translator”, “or by independently seeking out and completing translation tasks”. Providing the trainee with the experience of translation becomes the starting point in the process of developing the human skill of translation. Some scholars have suggested certain aspects of translation experience which play an essential role in the making of a translator as a trained professional.

Toury (1995) came up with the concept of socialization into the professional community. He identified the novice translator as primarily lacking self-confidence in the steps taken to solve translation problems. Like a novice in any other complex skill, the beginning translator needs feedback and guidance. The process described by Toury as socialization allows the beginning translators to acquire and assimilate norms, to “develop routines which enable them to cope in an effective way not with some abstract notion of ‘translation’, but with a concrete task, that of translating in compliance with what conception of that mode of text production is pertinent to a particular societal group” (Toury 1995: 250). Toury points to the fact that the norms which are internalized by the novice translator may differ with respect to many factors including place and time and therefore the process of initiation into the translating profession may have to be repeated. However, there are some issues which remain very vague, including the most fundamental questions like: ‘When does the process of initiation in the profession start? Is it with entering the translation training programmes, or is it with starting to make a living as a translator? How the productive routines are developed in self-taught translators who have never received any formal training and yet they are successful respected professionals?’

Toury (1995) suggests that a bilingual person who becomes a translator-in-the-making has to embark on a journey of self-discovery. To quote,

What trainees really need is the opportunity to abstract their own guiding principles and routines from actual instances of behaviour, with the help of responses to their performance which are as variegated as possible. Thus during the training period, the pedagogically most appropriate concepts are those associated with experiencing, exploration and discovery, involving as they do a considerable element of trial and error (Toury 1995: 256).

The experience, however and the process of self-discovery has to be at the same time responsive to the environmental feedback which according to Toury (1995) is normative in nature.

In the initial stages of a translator's development, the feedback directed at him/her is exclusively *external*: a novice simply has no means of assessing the appropriateness of various possible products and/or of the alternative strategies that would yield them. (...) The only way is to have the culturally acknowledged criteria supplied from without, namely by those who already have, or believe they have them, and who are powerful enough to impose their will. At the beginning, the main environmental feedback one receives is thus *overt* responses to one's verbal products, final or interim. In the latter case the responses may act as a kind of an external monitoring device, to the extent that the translator immediately responds and revises his/her production accordingly. (...) Little by little, however, translators might start taking *potential* responses into account, too, i.e., during the production itself. They thus develop an internal kind of monitoring mechanism, (...) (Toury 1995: 250).

Toury's suggestions of the internal monitoring device are in line with the observation of growing metalinguistic awareness in L2 learners who are involved in translation tasks.

The role of feedback in the development of translation as a trained skill becomes an essential part of the normative effect of translation experience past the stage of translation as a natural untrained ability of bilinguals. Kiraly's (1995) observed that to progress further in the process of evolution of translation as a human skill the translator in the making needs guidance and feedback to develop what he called the translator's self concept, that is the awareness of his/her role in the translation process. Feedback both external (from trainers, peers, mentors or clients) and internal (the translator's self-reflection) is thus an essential part of the translation experience from which translation competence derives.

Kiraly (1995, 1997, 2005) in his social-constructivist approach<sup>8</sup> combined the social and the individual perspective in the context of translator training. To quote,

The approach to translation skills instruction that began to evolve in Kiraly (1995) involves a doubly articulated view of translation process: from the translator's perspective, looking outward toward the social situation in which professional translation occurs, and looking inward toward the mental processes going on in the individual translator's mind during the production of a translation (Kiraly 1997: 139).

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<sup>8</sup> According to which humans learn from experience and from being actively involved in action.

This approach that combines the social and the individual psycholinguistic/cognitive perspective of the translator-in-the-making draws attention to the need to structure the learning environment in a way which will provide the most appropriate translation experience and feedback for translation trainees (Schäffner and Adab 2002). Toury (1995: 256) admitted that the environmental feedback which trainee translators receive is at risk of being limited and one-sided. To counterbalance this deficiency of external feedback Toury (1995) suggests exposing students to additional kinds of feedback more representative of the real world, including “less professional parties”, “non-conformist tutors” and peers acting as “assessors in all seriousness” (Toury 1995: 256-257). All the parties mentioned by Toury can act as potential receivers of the translation product, or editors responsible for the quality of translated texts.

Responding to external feedback is a crucial factor in shaping the translator and allowing him/her to progress from translation as an untrained ability to translation as a trained skill. The range of experiences and the fact whether they were or were not combined with constructive feedback will sensitize the novice to the cues which have to be picked up in the translation process and which are usually unnoticed by bilinguals acting as natural translators. Such cues include a multitude of factors such as style, cohesion, coherence and other socio-cultural factors. These cues as pointed out by Shreve (1997) are noticed when there is a change of focus from the micro to the macro context or when in the process of text comprehension a text is processed as a whole, in a more vertical sense and not in a horizontal string-like fashion which is symptomatic of those translators who rely on their bilingual abilities only (Jonasson 1998). As pointed out by Shreve (1997) these macro-textual clues become noticeable by novice translators only when a certain amount of translation experience has been gained which led to a change in the translators’ understanding of translation as an activity (Orozco and Hurtado Albir 2002, Presas 2000, González Davies 2004). The novice translator has a different perception of translation than the professional translator and experiences different translation tasks. Similarly, “the novice translator has different expectations of the process. This may mean that there is a selective attention on certain kinds of translation cues, for example lexical cues, at the expense of others” (Shreve 1997: 135). As observed by Shreve (1997: 136) “The movement within the translator ability space is related primarily to the nature, range, and fre-

quency of translation tasks over the course of a translator's acquisition history". Shreve (1997) probably refers to the fact that the intensity of translation experience can stimulate the development of translation competence whereas infrequent translation experience will not have a bearing on the progression on the translation skill continuum, more so if it is not combined with external guidance or appropriate corrective feedback. Similarly, the kinds of translation tasks aimed at translators at different points on the developmental continuum differ in their level of complexity and the experience of translating them results in different cognitive gains for those who experience the task. To illustrate the point, L2 learners are not likely to be expected to practice translation on a 10-page financial report or on an academic paper concerning geology since they struggle with translating a recipe for an Old English Apple Pie (Whyatt 2008). The most appropriate selection of translation tasks and adjusting them to the stage of translation skill development of the trainees is a matter of discussion for curricula design (see Kearns 2006, Kelly 2005).

Kiraly (1995) observes that with increasing experience in translating "skills are less likely to be acquired by repeated practice; less likely to develop naturally without specific training and pedagogical intervention, and more likely to involve translation quality at levels beyond that of mere semantic and syntactic correctness" (quoted after Kelly 2005: 15). In his proposal of the "translator's self-concept" defined as the growing awareness of the role the translator plays in the process, he points to the development of "a functioning translation monitor" (cf. Toury's (1995: 250), internal kind of monitoring mechanism').

In view of the accumulating knowledge about the translation process (see Krings 1986a, Gerloff 1986, Lörsher 1986, 1991, 1992; Tirkkonen-Condit and Jääskeläinen 2000, Hansen 2002) the recognition of the need to replace the traditional teacher-centred transmissionist approach to teaching translation (still somehow present in Toury 1995) has become widely recognized. As observed by Cronin (2005) although translation schools have been in operation for more than half a century now at least in western Europe (see Cronin 2005: 250), it is only in the 1990s that, the importance of providing translation trainees with genuine translation experience which would reflect the real life requirements of the translator's work was recognized (Kiraly 1995, Cronin 2005). The gradation of the translation experience in a formally structured environment has become



an issue of concern for translator trainers. In pedagogical practice, however it turned out that despite the fact that translation as a profession has a long history there is a vast pedagogical gap when it comes to the institutionalized training of future translators.

#### 4.3. TC acquisition and the “pedagogical gap”

In the late 1980s and early 1990s rapid changes in the political and economic life in Europe, together with growing globalization brought about an equally rapid transformation of the translation market (Király 2005). The demands for translators led to the establishment of translator training programmes throughout Europe from east to west. The “pedagogical gap” was severely felt by many trainers. The shortage of guidance led to few groundbreaking publications which at least offered a different more promising way of teaching translation so that the skill developed during training would prepare the students for their professional challenges of the market which needs them. It was in 1995 that Gile published his *Basic Concepts and Models for Interpreter and Translator Training*, Kussmaul his *Training the Translator* and Király his *Pathways to Translation. Pedagogy and Process*. The three publications contributed major insights into how the learning environment should be structured to provide the best conditions for the trainees who are motivated to develop their translation skill into professional expertise. Let us briefly discuss their major contributions.

##### 4.3.1. Focus on the translation process

The major source of the need to revise the learning environment in which translation skill is developed to reach professional excellence comes from the growing understanding of the translation process. Within the practically oriented school in the new discipline of Translation Studies in the mid 1980s growing interest in the translation process brought an empirical turn in studying translation. Translation scholars from Germany (Krings 1986b, Lörsher 1986, 1991, 1992, Kussmaul 1995) and Finland (Tirkkonen-Condit and Jääskeläinen 2000) started to use TAPs to investigate how language processing during translation is handled by the human mind. As expressed by Cronin (2005: 251) with all the imperfections TAP research provides “some way of getting to know what goes on in the translator’s head and therefore allows us to formulate, however tenta-

tively, a psychologically valid description of the act of translation". The 1980s interest in translation as an intellectual process of problem solving and decision making provided a lot of insight into the complex nature of the mental operations that are carried out in the translator's mind. Until then most teaching methodology was product oriented, focusing on comparison and contrast between the SL text and its translation, or between the translations performed by inexperienced translators and the model/ideal translation produced up to professional standards. The mental journey which started with reading the SL text and finished with presenting the TL text was believed to be inaccessible and confined to the 'black box' of the translator's mind. This long-lasting belief was possibly very flattering for experienced translators as it created reverence and a belief that translation is a special gift which is granted to few individuals. Especially in the area of literary translation, the skill was, and to some extent still is, believed to be a matter of 'talent'. Nida's (1981) title "Translators are born not made" serves here as a sufficient piece of evidence. Baker (1992) in a much revealing publication firmly stated that translators as any other professionals should be able to explain the source and principles of their expertise instead of saying that they are translating well because they have a flair for it. Piotrowska (2007) points out that the debate whether the skill of translation is art or craft is from today's point of view, when translation is first and foremost a business, rather dated. To meet the market demands more and more translators need to be trained and the training has to prepare them for their future career in translation. As in any other profession marrying individual predispositions and inclinations (their talents) with professional training (see Gile (2009: 7) quoting Healey's (1978) view that "Translators are made not born") is an ideal match most likely to reach the level of expertise.

The increased understanding of the problem solving and decision making that goes on in the mind of a novice inexperienced translator brought about suggestions that process-based approaches to translation training are more likely to succeed than previously applied product-based approaches. These suggestions seem to echo an appeal made by James Holmes who said "It seems to me that before we can know how to train translators, we have to know what takes place in the translation process" (1988: 95-96). Holmes' conviction is still shared by many scholars (Shreve 1997, Kiraly 1995, Hansen 2003, Cronin 2005) with keen interest in relating the findings of the translation process research to translator

training. Although the effort to unravel all the intricacies of the translation process continues and remains an open area of investigation Holmes's conviction holds valid and allows to hope that the more we know about the translation process the more we will know about the process of TC acquisition. Current research allows one to assume that depending on the stage on the developmental continuum of translation as a human skill that a given translator has reached, the translation process is handled differently and therefore it results in different products in terms of quality (see chapter 3). Consequently, making translation trainees aware of the mental processes which need to take place for a SL text to be translated into a TL text in order to bring the most desirable translation products thus becomes a vital part of their professional training.

Gile (1995) is emphatic that translator training should adopt a process-oriented approach. Since a lot of his suggestions refer not exclusively to interpreting but to Translating, where the capital 'T' denotes both translation and interpreting, the quote below is valid also for teaching written translation:

The idea is to focus in the classroom not on results, that is not on the *end product* of the Translation process, but on the process itself. More specifically, rather than simply giving students texts to translate, commenting on them by saying what is "right" and what is "wrong" in the target-language versions produced, and counting on the accumulation of such experience and indications to lead trainees up the learning curve, the process-oriented approach indicates to the student good Translation principles, methods, and procedures (Gile 1995: 10).

The verb, 'indicates' points to implicit guidance rather than to explicit instruction. The importance of raising awareness in beginning translators of the process which accompanies the intellectual activity of translating has been acknowledged by many scholars. The process of translation has been divided into different stages, for example Ljudskanov (1969) saw only two phases: SL text comprehension and TL text production (also Gile 1995), Seleskovitch (1976) insisted that the translation process also includes the stage of 'deverbalization' in between the comprehension and production phase, when the translator has interpreted the message but has not yet found the verbal means in the TL to express it. Other scholars termed the middle stage differently, e.g., the transfer meaning stage. Wilss (1976: 118) suggested a more detailed view of the translation process which includes

SL text analysis, assessment of translation problems, solving translation problems, assessment of equivalence between the SL text and the TL text and re-expression. Bell (1991) in his psycholinguistic model offered a more detailed description of the translation process which includes: SL text → visual word recognition system → syntactic analyzer → semantic analyzer → pragmatic analyzer → TRANSLATE (planner, idea organizer, conceptual and semantic representation, general world knowledge) → pragmatic synthesizer → semantic synthesizer → syntactic synthesizer → TL text.

Hönig (1991) proposed an idealized model of the translation process stressing the fact that it takes place in two workspaces, the cognitive/conscious space and the intuitive/subconscious space. While TAP research is able to capture the cognitive conscious problem solving and decision making, it is unable to access the intuitive processing which takes place in the translator's mind. The fact that professional and novice translators significantly vary in terms of the amount of verbalizations produced during thinking aloud allows one to deduce that most language processing performed by translating novices is cognitive rather than intuitive in nature. The two modes of processing are generally acknowledged by theorists and professionals with ample support from translation process studies (Jääskeläinen 1989). The problem-free spontaneous smooth transfer is nonstrategic in nature and referred to as 'automatic' (Séguinot 1997). The strategic problem-solving and decision making phase is non-automatic and marked by a disruption in the progression of the translation process. This disruption is caused by a psychological or cognitive barrier in the form of a translation problem (see Piotrowska 2007: 62) which needs to be solved. In the process-oriented approach it is assumed that drawing students' attention to how they process information, spot and solve problems and make final decisions will help them to understand the process which frequently will involve non-linguistic knowledge, or will require the use of non-linguistic knowledge to make linguistic decisions. Kiraly (1997: 139 based on Boekaerts 1981) postulates that the two processes, subconscious and controlled "do not necessarily form a dichotomy" (Kiraly 1997: 151) in the process of translation. Quite on the contrary, both subconscious processing and cognitively controlled problem solving interact in the mental space of the translator's mind (see Hönig 1991). The uncontrolled (not consciously controlled) workspace is where spontaneous, automatic or 'tentative translation elements' occur and where translation problems surface "when automatic processing is incapable of produc-

ing tentative translation elements. These problems are brought into the focus of attention in the controlled processing centre, and a strategy is chosen and implemented in an attempt to deal with them” (Kiraly 1997: 151). Kiraly stresses that the intuitive processing should be encouraged as it plays an important role in the translation process. Piotrowska (2007) differs from Kiraly and postulates that in order to develop professional competence in translation students their training should foster the strategic (conscious/cognitive) approach.

Piotrowska (2007) in her pioneering book set in the Polish context, in which she tries to lay the foundations of methodology for teaching written translation suggests that translator training should focus on the conscious strategic part of the translation process. Translation students should be taught to recognize translation problems and apply strategies and procedures which will help them to make decisions on how to solve the problem. Piotrowska (2007: 62) points out that the translation process can be automatized in certain areas but nevertheless there will always remain a vast area where conscious decision making will have to take place.

To sum up the vast body of knowledge on the translation process includes both prescriptive assumptions and empirical data and although the process-oriented approach to translator training is a welcome change to the product-oriented approach it has to be operationalized to provide pedagogical guidance. In view of the multitude of sometimes quite subtle knowledge needed to translate implicit guidance rather than explicit instruction becomes a favoured approach which in consequence leads to a revolution in the translation classroom, which has led to the change in the power relations between the trainer/teacher and the trainee/student. These changes similar to the process-oriented approach are aimed at providing the best learning environment for the development of translation competence in future professionals.

#### 4.3.2. Learner-centred approaches to translation training

The growing body of knowledge about the nature of the translation process has led those interested in searching for more effective teaching methods to realize that the old fashioned transmissionist models have to be replaced. Alternatives needed to be found to the methodology which relied on the ‘read and translate directive’ in which future translators would be given a text to translate at home and the class following their homework involved compar-

ing the translation produced by individual students to the model translation in the possession of the teacher. The methodology based on what Kiraly (2005) calls WTNS (Who will take the next sentence) technique was not in line with translation process research and very much behind the approaches which revolutionized foreign language teaching methodology (González Davies 2004: 11). The Communicative approach shifted the entire focus of SLA from linguistic accuracy to pragmatics with its social rules of language behaviour and complex discourse grammar. The Humanistic Teaching Principles gradually replaced authoritative “chalk and talk” (González Davies 2004: 12) teacher-oriented methodology. The learner-centred approaches to language teaching/learning meant that “for teaching to be effective, a learner must be able to create meaningful and personally relevant patterns” (Caine and Caine 1994: 90, quoted after González Davies 2004: 12). For the teaching/learning to bring desired effects, the learner has to become involved intellectually and emotionally into the learning process. New innovative approaches and concepts aimed at activating the learners appeared including learner autonomy, reflective teaching, meaningful learning, and motivation. These notions became to be advocated by pedagogically oriented translation scholars such as Kiraly (1995, 2004), Cronin (2005), Colina (2003a), González Davies (2004) to name the most outstanding authors of publications which have tried to bridge the pedagogical gap in teaching translation as a trained skill. The delay in the emergence of the new approach in translator training is significant. In 1971 Dell Hymes introduced the concept of communicative competence which became a ‘key concept’ in second language methodology. Canale and Swain (1980) published a definition of communicative competence which became the bedrock of the Communicative Approach. The first publications on translation teaching which included Humanistic Teaching Principles appeared in the mid 1990s (Kiraly 1995, to some extent also Gile 1995 and Toury 1995) and early 2000 (González Davies 2004, Cronin 2005, Colina 2003b). The new approaches combined the advances in understanding the nature and process of translation with the Communicative Approach, Humanistic Teaching Principles, Cooperative Learning and Social Constructivism. The learner is no longer a receiver of knowledge transmitted by the teacher but a subject in the very centre of the learning environment, the teacher becomes a guide, an advisor, a partner in the mutually shared learning process.

In Kiraly’s (2000) view the primary aim of translation training is to empower trainees and enable them to develop their ‘professional selves’.

The focus is shifted from teaching to learning. Teachers become assistants, consultants and facilitators. Learning to develop translation as a trained skill can only be achieved via ‘situated experience’ which on the one hand is related to the student’s prior knowledge but at the same time to the professional behaviour it aims for. With the focus on autonomy and learning through authentic action based on the ideals of Social Constructivism and Collaborative Learning, the learners are involved in real world translation projects. In Kiraly’s (1997) own words,

Constructivism provides an educational framework that is particularly compatible with the contemporary emphasis on process in translator education. Rather than teaching students how to translate, this approach sees the primary task of the instructor as that of putting students into realistic professional translation situations where they will collaborate with each other in constructing their own understandings of “appropriate translation behaviour”. Collective and individual consciousness raising will be the teacher’s main goal rather than the unidirectional transmission of information (Kiraly 1997: 157).

Creating this kind of learning environment provides according to Kiraly conditions for acquiring translation competence. A classroom is turned into a “forum for the development of expert, personalized and language-mediating skills” (Kiraly 1997: 159-160). Translation students do not have to go out of the classroom for real life work experience, but instead the professional reality should enter the classroom and provide conditions for what Kiraly calls ‘cognitive apprenticeship’ and ‘situated cognition’. Students working in groups according to the principles of Cooperative Learning where team work, on the one hand provides opportunities for generating ideas, negotiating solutions and reflecting on the process, and on the other hand contributes to more effective learning. When cooperating with others students do not feel as inhibited as they might do in a student teacher interaction, they work as a team supporting each other rather than competing with each other. The fact that they are united in a collective effort to solve translation-problems indirectly works towards the improvement of their communicative and social skills (see González Davies 2004: 13).

Most of the ideals of the educational philosophy are convincing, some might have cause for concern about how well they will practically fit in with a curriculum design (Kearns 2006) which has a limited number of teaching units per course.

The question of situated cognition (Risku 2002) and a ‘translation project workshop’ where students deal with professional authentic texts is very attractive and shared by many other translation scholars. Nord (1988, 1991) through her scholarly work has earned the name of a strong advocate of the profession-based learner-centred approach in which training should simulate professional practice with the awareness of its function and ‘meaningful realistic purpose’ (after Kelly 2005: 12). Pym talks of “the need to use “authentic” or badly written texts as bases for discussion and debate, and the desirability of involving students in a wide range of professional or semi-professional activities” (Pym 2003: 493). Other scholars favour a task-based approach pointing to the fact that the texts used in the translation classroom have to be well adjusted to the actual abilities of the trainees. Appeals are made to revise the curricula to create training programmes which will utilize the process-based approach and learner-centred approaches (Massey 2005, Kiraly 2005, Cronin 2005) while some scholars raise an important issue of training the translator trainers and consider the fact that translation students of today may have different abilities (Kelly 2005: 43-44). Other debated issues include the question whether translation trainees should be educated or trained (Kearns 2008<sup>9</sup>), whether they should specialize in particular ESP areas of expertise or whether the focus should be on flexibility and adaptability to the demands of the translation market. Kiraly (2005b) hypothesizes that:

translator competence emerges as the result of the collaborative completion of authentic translation work, and by observing translators, both non-professional and professional, in the socially-situated praxis of authentic translation work, we can acquire a privileged view of the nature of the translation process and glean readily applicable insights into how to best help students develop their capability to function as professional translators in the real world outside of the academic ivory tower (Kiraly 2005b).

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<sup>9</sup> Kearns (2008: 209) discusses the vocational/academic dichotomy in translator training and concludes that the “reality of curricular renewal in translation education is messier than is often acknowledged”. While providing educational arguments that universities rather than vocational training colleges are the right place to educate future translators Kearns (2008) also draws attention to consider the market demands and provide translation trainees with transferable skills.



Yet, the questions asked by trainees are still the same, what do I need to learn to be able to translate with facility? How long does it take to develop self-confidence which is needed for fluent competent translating? Can I provide translation services without formal training? These questions are still not easy to answer satisfactorily for the trainees who are frequently extremely self-motivated to work on acquiring their professional competence, committed and devoted to their self-development as translators.

#### 4.4. Different routes to translation competence

It remains to be recognized that the human skill to translate may develop along different evolutionary lines. The importance of training is today undisputable, but historically it is a fairly novel development. Institutionalized translator training programmes do not have a long history and as observed by Cronin (2005) have not successfully developed solid pedagogical foundations. Compared with the history of translation as a service to humanity, institutionalized translator training is a modern invention full of frequently debated challenges (Kelly 2005, Cronin 2005, Plusa 2000, 2007). Respect to history and countless expert translators who have collectively played a key role in the transmission of knowledge in what Donald (2001) calls mind-sharing cultures requires the recognition of the fact that there are many different paths which can lead to the development of expert translators. It frequently comes as a bit of a puzzle that throughout history there have always been many excellent practicing translators who have never been trained in translation training institutions. The argument is frequently raised by opponents of institutionalized translator training who believe that, "Translators cannot be 'trained': they emerge by a natural process" (Gouadec 2007: 253). On the other hand, complaints are being voiced that translation training institutions are not really successful in preparing their trainees for the open market. Opponents of the rigid requirement of formal translator training claim that the human skill to translate will develop in some individuals who deliberately engage in the experience of translation and practice translation without any institutionalized support. To my knowledge there are no clear data on the proportions between the number of translators with formal qualifications and practicing translators who are self-taught at least in those countries, including Poland and the US, where formal accreditation (licensing) is not required to provide translation services. To reconcile the different paths

to translation we can only assume that in both cases there is a learning process involved, a broad concept of education, or self-education perceived in its broad anthropological sense as the up-bringing of the mind. In this sense a translator in the making is then best perceived as an expert learner placed either in the context of formal institutionalized training, or reliant on mentoring and self-learning. Robinson (1997: 51) suggests that translation involves “complex processes of conscious and unconscious learning” and one should add that it is so provided that one is indeed devoted to learning and developing the human skill to translate.

In the spirit of Giddens<sup>10</sup> one could then say that the human skill to translate is never static if it is supported by continuing practice coupled with self-reflection. As such it is then best perceived as a product of a holistic endeavour. Those who want to progress their skills from their natural ability continuously work towards expertise acquisition and reflect upon the way they do it. The need for enhanced reflexivity (to use Giddens’ (1991) term) comes first of all from having access to two linguistic systems which results in natural metalinguistic awareness that language is purely a communicative tool which can be effectively used in communication (also in intercultural communication via translation). Clearly self-reflexivity is a feature of expert learners who use it in order to build up their self-confidence necessary for making decisions on how to solve translation problems. Self-confidence in turn is a feature of entrepreneurial personalities (Koh 1996) which apart from self-confidence are characterized by self-management, internal locus of control and thus self-direction, need to achieve (expressed in creative thinking, flexibility, adaptability) and the propensity for moderate risk taking based on self-knowledge and the awareness of one’s abilities (Korunka et al. 2003). For translators as well as for L2 users (see Whyatt 2009a) self-confidence is a fluid quality and the right amount has to be well balanced so that one’s self-confidence is truly productive and far from being under- and over-confident it is based on a sound assessment of one’s capabilities. It is only then that self-confidence will assist a translator in his or her work in which informed guesses frequently have to be made relying on one’s intuitive proceduralized skills of language use. In effect translators with

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<sup>10</sup> Giddens, Anthony is a British sociologist who pointed out to the role of self-reflexivity both on an individual and on the institutional level in the creation of identity in post-modern societies.

considerable experience become a collection of seemingly contradictory but in fact complementary attitudes of being confident and humble expert learners.

An expert learner reflects on the process of learning to evaluate the results, uses the knowledge of oneself as a learner to become more aware of effective strategies, and is able to control and monitor the process in order to achieve a desired aim (Ertmer and Newby 1996: 1). The ideas so much discussed in educational contexts under the term of learner autonomy might be essential to self-taught translators who develop their skills by working out appropriate procedures. In the process of self-critical creative learning they use reflective thinking, or as put by Schön (1983) reflection-in-action which relies on a self-questioning approach via which they gain a metacognitive control of their learning process. In institutionalized translator training programmes this aim is achieved differently, e.g., by guidance, corrective feedback which aims at installing appropriate working habits. In both cases the interplay between personality features, existing abilities and feedback (or self-feedback) is essential for the development of translation skill to reach the level of expertise. Undoubtedly translation expertise relies continuously on the reflective professional practice in which translators have to handle complex and unpredictable translation problems. At the same time their experience is used to revise their skills and procedures in the process of endless self-development and self-mastery. Needless to say, there is no ultimate level of attainment in translation expertise development (Shreve 1997) although there is a tacit agreement among TS scholars that it takes about 10 years of practice in providing translation services to be considered an expert professional.

In terms of expertise development research, Hoffman (1997) drawing from the area of cognitive psychology suggested that it is only after 10 years of professional practice that one becomes a true professional, an expert in any area of expertise. With reference to interpreters he defines an expert as “one whose judgments are uncommonly accurate and reliable, whose performance shows consummate skill and economy of effort, and who can deal effectively with rare or tough cases, and who has special skills or knowledge derived from extensive experience with sub-domains” (Hoffman 1997: 199-200). As Hoffman stresses the act of becoming a professional is best seen in the developmental progression, as a route (or a journey) which stretches from a ‘naïve’ (i.e., somebody completely ignorant of the domain) who only by making a conscious choice to pursue a

career in translation becomes a novice motivated to acquire all the necessary skills and knowledge. The novice then becomes an apprentice (meaning the one who is learning preferably under the eye of a master or a trainer, i.e., in a translation training programme). This can take up to 12 years in the traditional craft guilds but, as suggested by Hoffman, can be equivalent to 8 months to 3 years of translation training programmes. Then the apprentice becomes a 'journeyman' (defined by Hoffman (1997: 199) as a person who can do a day's work unsupervised but under orders). Then usually after 5 years as a journeyman one becomes a professional and an expert. Undoubtedly, it is not only the length of the translation experience but its quality and intensity that matters.

Another range of factors which are rarely discussed in the context of professional translation skills development includes affective factors which most likely stimulate the process of translation expertise development. Most translators in the making as well as those with considerable work experience are extremely self-motivated and dedicated to the development and maintenance of their knowledge and skills. They enjoy the activity and find it self-rewarding (Sofer 1997/2006). I shall return to a detailed discussion of expertise development and the role of affective factors in chapter five. For the time being, however let us have a look into the world of professional translators in order to see the present discussion on translation competence and expertise against what is expected and required of translators in today's world.

#### 4.5. The professional self and translation as a profession

In recent years and possibly parallel with the need to educate translators in a response to growing market demands, more and more attention has been devoted to the development of translation expertise. Yet, some scholars involved in translator training become clear that the schools of translation and training programmes available are only a starting point, an initial stage on the route of professional development as translators. As observed by Płusa (2007: 86) the diplomas are only a kind of a pass to their future career as professional translators.

A lot that we know about translation as a profession is mostly derived from theoretical assumptions and from idealized expectations. As observed by Walters (2005), the human factor of the professional self with all cognitive limitations and psychological constraints is not taken into

account and there is a dearth of empirical research into the translation performance of practicing translators for whom translation is a way of making a living or supplementing their income earned elsewhere. To quote,

The profession of the translator, with its problems and practical considerations, is sporadically, though seldom systematically, treated in journals and newsletters. The practice of the profession under pressure, working to deadlines, satisfying different types of client, using dictionaries of all kinds, whether monolingual or multilingual, general or technical, hard-copy or computer-based, by in-house or freelance practitioners, making use of expert or other informants (often the clients themselves) is occasionally discussed, usually on an anecdotic level (Hickey 1998: 3).

It seems that interpreters have recently attracted more attention as research subjects than written translators (Pöechhacker and Shlesinger 2002). Due to some interest from cognitive psychologists (De Groot 2000) we have come to realize that the human factor means that even professional experienced interpreters make mistakes and tend to sacrifice accuracy for the sake of fluency. In written translation the performance of professional translators has not been extensively studied. Rarely, professional translators share their ideas about their translation experience in scholarly accounts with reference to predominant theoretical considerations (see Biguenet and Schulte 1984 for a collection of essays in which literary translators attempt to reconstruct the translation process). At the time when Think Aloud Protocols were used to investigate the translation process professional translators were considered poor subjects for the method as they were not verbalizing a sufficient amount of verbal data fit for analyzing their thought processes. Investigating the performance of written professional translators by inference from the finished product, that is mostly by the method of error analysis was rare and problematic as it required assessment against a well defined norm, but the norm was difficult to define as it depended on other dynamic factors such as the function and recipients of the TL text (see Toury 1995, Hermans 1991, Pym 1998). More recently any product oriented analyses have been considered old-fashioned with the focus laid on the process as well as being problematic without a clearly defined concept of translation quality (see House 2001 for a review of different approaches to translation quality and translation quality assessment). Although most translators and translation scholars know immediately whether the translation of a given text is ade-

quate (not to use the subjective term ‘good’) scholars are unequivocal about what makes a good translation (see Korzeniowska and Kuhiwczak 1994). As observed by Duff (1981: 1) most discussions of quality in translation result in criticising faults. To quote, “It is unfortunate that translation is perhaps more often criticized for its defects than praised for its merits. The faults of a bad translation are immediately apparent, the virtues of a good one may easily pass unnoticed” (Duff 1981: 1). House (2001) suggests that the quality of a translation should be considered on two levels: the primary level of linguistic description based on the knowledge of language and the norms of language use and on the second level referring to “value judgements, social, interpersonal, ethical questions of socio-political and socio-psychological relevance, ideological stance or individual persuasion. Without the first one, the second one is useless, in other words, to judge is easy, to understand less so” (House 2001: 257). Yet, an intersubjectively verifiable set of procedures on which translation quality assessment could be judged is not available and remains another puzzle in the area of human translation.

Still it is assumed that professional translators are expected to produce translations of high quality both linguistically flawless and communicatively fitting in with socio-pragmatic requirements. As suggested by some scholars (Venuti 2000) it is best if the translator is in fact invisible in the finished product (see Jakobsen 1994). The translator is to give voice to the author of the SL text but should not be heard himself/herself. The question whether it is at all possible has been raised and attempts have been made to empower translators (Tymoczko 2007). As it was mentioned in chapter 1, the demands placed on professional translators are high. The EU directive specifies the profile of an EMT (European Master’s in Translation) holder listing the following requirements:

a professional translator (“a high-calibre graduate”) in addition to the basic professional requirements such as initiative, intellectual curiosity and motivation should have sufficient language skills (perfect command of the first language and thorough knowledge of two or more other languages), thematic knowledge that is familiarity with economics, financial affairs, legal matters, technical or scientific fields (including expertise in the acquisition of knowledge)

The applicants for the MT should additionally have: good powers of concentration, an ability to grasp varied and often complex issues swiftly, a high degree of motivation and intellectual curiosity, an incli-

nation to show initiative and imagination, an ability to work consistently and under pressure, both independently and as a member of a team, a readiness to accept advice and an ability to give feedback, basic computer skills<sup>11</sup>.

As it can be gathered from the above list of requirements the demands are extremely high, not for “a mere mortal” (Walters 2005: 212), not for everybody (Hejwowski 2004). It can be expected that those who are able to meet such requirements are already self-selected and not only equipped with excellent language skills but also with adequate cognitive make-up to accommodate all the requirements specified in the quotes above.

Yet, professional translation in the sense of translation services available on the market has many facets and it is not reserved for degree holders in translation. In many countries, including Poland and the US for example, formal accreditation is not needed to provide translation services on an open market with the exception of sworn translators. In effect all translations which are not legally binding documents whose translation has to be certified by a stamp and the signature of a sworn translator can be translated by anybody who undertakes the job of translating them, anybody who considers himself/herself a translator (see chapter 1). In consequence, there is a problem of quality and there are many translations publicly available which should not see the light of day (see Korzeniowska and Kuhniewicz 1994) and which most likely were produced by natural translators who have not developed translation competence in a professional sense discussed in this chapter but who use their untrained ability to translate.

As pointed out by Shreve (1997), professional translation is not equivalent with advertising translation services or with being a graduate of a translation training programme but with the ability to produce what Shreve (1997) calls a ‘constructed translation’ most likely meaning high quality communicatively and formally flawless translation. The underlying knowledge needed to produce such a translation (TC) cannot be assimilated in the form of step by step instruction but develops over time as a result of intensive practice and feedback combined with growing awareness of the ethics involved in the profession (Gile 2004). The professional associations of translators try to safeguard the interest of pro-

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<sup>11</sup> ([http://ec.europa.eu/dgs/translation/programmes/emt/key\\_documents/emt\\_sample\\_curriculum\\_en.pdf](http://ec.europa.eu/dgs/translation/programmes/emt/key_documents/emt_sample_curriculum_en.pdf))

professional translators and the trust of clients seeking translation services by issuing recommendations and setting up standards to ensure high quality translation.

In the Translator's charter published by FIT (The International Federation of Translators) in Section I, General obligations of the translator, it states:

1. The translator shall possess a sound knowledge of the language from which he translates and should, in particular, be a master of that into which he translates;
2. He must likewise have a broad general knowledge and know sufficiently well the subject matter of the translation and refrain from undertaking a translation in a field beyond his competence<sup>12</sup>.

Without the support of legislation, these recommendations as well as those issued by associations of professional translators in individual countries<sup>13</sup> which provide care over the 'right level of translation competence' (see Plusa 2007: 85) are not always followed. The translation market is a fast growing business and some suggest (Gouadec 2007) that survival on the market is the best measure of professionalism. The question 'who is a professional translator?' is then equivalent to the question, 'How successful is a person in providing translation services?' The measure of professionalism is then equivalent to how well can a translator function on the translation market open to huge translation agencies networking their jobs internationally and to free-lance translators.

Who is a professional translator? Chriss (2006), the author of *Translation as a profession* offers the following definition:

Professional translators are applied linguists whose ability to work with language, write well, and for freelancers to operate a business, represents their source of income. Professional translators are people dedicated to their languages and the nations, societies, and cultures which come with them. They are devoted to their ability to understand their

<sup>12</sup> [http://entomologia.rediris.es/pub/nj\\_bscw.cgi/d526459/Carta%20UNESCO.doc](http://entomologia.rediris.es/pub/nj_bscw.cgi/d526459/Carta%20UNESCO.doc)

<sup>13</sup> In Poland there are two associations which issue recommendations and safeguard the quality of translation services provided by the members they associate: STP, *Stowarzyszenie Tłumaczy Polskich* [Association of Polish Translators] and TEPIS, *Polskie Towarzystwo Tłumaczy Ekonomicznych, Prawniczych i Sądowych* (Polish Society of Business, Legal and Court Translators/Interpreters).



source language and write in their target language. They recognize that translation is both an art and a craft, and so are committed to deepening their knowledge of the fields they translate in, and to cultivating greater facility for writing about such matters (Chriss 2006: 140).

The above quote is very capacious and underlines the combination of the social and individual aspects involved in the profession understood as a service to a community in the global and in the local sense. The professional translator is perceived as an expert fully committed to achieving and maintaining his/her expertise. This perception fits in well with the developmental perspective on translation as a human skill discussed in this work. Yet, some scholars argue that not every professional translator is an expert translator (Jääskeläinen 2010: 215) and the length of experience has to be considered together with their job requirements and the quality of their work (Sirén and Hakkarainen 2002: 75). As observed by Jääskeläinen (2010: 215) the fact that one works as a professional translator does not guarantee “consistently superior performance in the domain”, a key feature of expertise (Ericsson et al. 2006: 3). Consistently as suggested by Sirén and Hakkarainen (2002: 75) a further distinction should be made between expertise in translation and professionalism.

To sum up, becoming a professional translator means joining the professional market. More and more books are written to advise those who want to pursue a career in translation telling them how to set themselves up as professional translators, how much to charge, how to deal with clients. Some of the practical guides are written by experienced professionals and provide invaluable information about the profession which complements academic training or self-coaching for those who see their career in language translation. Sofer's (1997/2006) *The Translator's Handbook* (sixth edition, US based) Samuelsson-Brown's (2010) *A Practical Guide for Translators* (fifth revised edition, UK based), Chriss's (2006) *Translation as a Profession* (based on a series of previously published articles and US based) or McKay's (2006) *How to Succeed as a Freelance Translator* (also US based) are a minefield of practical information about the profession, its demands and benefits, hardships and delights. Sadly, there are also pseudo-guides to the business of translating, like for example Féraillieur-Dumoulin's (2009) *A Career in Language Translation* where professional translation is devoid of ideology and work ethics and portrayed as a dictionary-based computerized commodity to be sold on the open market (see a review by Whyatt 2011). Undoubtedly, the experience of practitioners described by

true masters and experts in the profession is not only precious for novices in the profession but also for TS scholars and translator trainers. In the spirit of James Holmes who pointed to this rich source of information and stressed the need “to “translate” and integrate the everyday speech statements of practising translators about their translation activity” (Holmes 1988/1994: 96) such guides have empirical value for the study of translation as a human skill to reach the level of expertise. The message sent by experienced practitioners, who have gone along the evolutionary lines of translation as a human skill from novices to experts, is not only informative but also inspirational for future practitioners. As put by Sofer

Translation has put me in touch with more areas of human knowledge and endeavour than almost any other career is capable of doing. At one time or another, a translator becomes part of almost everything (...). But best of all a translator never stops learning. Language keeps changing, knowledge keeps increasing, and the professional translator stays on top of it all. Once you have developed good translation habits, you will enjoy the activity of continuous learning of new words and terms, and being part of the latest advances in many areas of human knowledge. It is, indeed, a privileged position (Sofer 2006: 151).

Undoubtedly the value of experience allows long serving practitioners to clearly see the most essential aspects of translation work: its creativity, intellectual benefits of learning new things, its privileges of being involved in intercultural communication and exchange of knowledge across language barriers. Other authors share their experience of practicalities involved in providing translation services. Chriss (2006), for example provides solid matter-of fact information on taxation, rates, workload, technology and equipment, accreditation and professional organizations as well as well-organized information on translator training schools and certificate programs, and a list of recommended reading, brief but informative. Real experience-based advice is shared on skill development and language skills maintenance, on the scarcity of narrow subject dictionaries and the need to rely on parallel reading to find adequate terminology. To quote from a quick question and answer section:

Q: How do I find good dictionaries?

A: I wish I knew. Most translators, particularly those working in technical fields, struggle with this problem. Years can pass before new terms in computers, finance, or what have you appear in print, so translators

often rely on parallel reading to find good translation for new terms (parallel reading is the processing of reading two versions of one text), sharing their own term list via the Web, and checking with clients and experts in the subject fields they work in (Chriss 2006: 170).

Despite the great value of practical guides for aspiring translators they more or less assume that one already is a professional translator and as such miss a vital link in the developmental continuum of translation as a human skill. Indeed, not many books are written to shed light on how one becomes a professional translator and how one can achieve the professional readiness and the personal self-confidence to enter the translation market.

#### 4.6. Conclusions

The purpose of this chapter was to show the current understanding of translation as a trained skill in the developmental progression from the natural untrained ability to translate discussed in chapter 3. Three perspectives on professional translation competence defined as the underlying system of knowledge needed to translate were presented and discussed. The additive perspective views TC as a set of added capacities to natural translation ability resulting from the bilingual foundations. These added capacities include metalinguistic awareness, intercultural sensitivity as well as a range of still unspecified cognitive factors. The componential perspective sees TC as a set of sub-competencies which include strategic sub-competence which governs the other four sub-competencies including bilingual sub-competence, instrumental sub-competence, extralinguistic sub-competence and psycho-physiological components. The third holistic perception of TC sees it as a holistic system of knowledge both declarative and procedural which allows for fluent translation. The lack of agreement among TS scholars on how TC should be most adequately defined is counterbalanced by the general agreement that TC is experience-derived knowledge. From the educational perspective, however the lack of a generally accepted definition of TC is a major drawback. The scant attempts to describe the process of acquiring TC point to some directions. There is a tacit agreement that TC is developed from the pre-existing knowledge which according to some scholars (Toury 1995, Presas 2000) undergoes some transformations as a result of the translation experience. The changes affect primarily the bilingual knowledge which has to be re-organized to allow for fluent interlingual lexical access and

retrieval as well as for the efficient control of cross-linguistic interference especially in the form of negative transfer at the lexical and conceptual level. There is also a general consensus of opinion that in the process of learning to translate according to professionally accepted principles novices develop a set of habits parallel to their growing understanding of translation as a purposeful socially required activity. Unfortunately, there is a dearth of empirical data on what working habits are actually acquired, in what succession and what effects they bear on the quality of translations produced by trainees.

The PACTE group sees the process of learning to translate to reach professional expertise as a dynamic learning process in which the pre-existing knowledge is integrated and re-structured and onto which other capacities are added. Shreve (1997) sees the development of translation expertise as an evolutionary space which is in fact limitless as there is always room for improvement. These perceptions although convincing do not seem to provide sufficient guidelines for translation pedagogy and some scholars point to the pedagogical gap in translation teaching methodologies (Cronin 2005, Piotrowska 2007).

Starting in the late 1990s and continuing into the new millennium publications appeared which pointed to the need to restructure the learning environment in a way which would provide trainees with the best translation experience from which they could acquire their professional translation competence. Process-oriented approaches placed the learner in the centre of the learning environment putting an end to the old transmissionist teaching methods. The process-oriented approach in opposition to the traditional product-oriented approach, which focused on studying the resemblance the TL text bore to its SL original, viewed the product as an outcome of the translation process taking place in the translator's mind. It became clear that it is the process with its creative problem solving and decision making performed by the translator that holds the key to the quality of the final visible product needed and commissioned by a social need to communicate across language barriers. Scholars interested in translator training (Gile (2004), Kiraly (2005), Cronin (2005), González Davies (2004), among others) more or less agree that translation trainees should first become aware of the creative thought processes (Kussmaul 1991) which are required to translate, and which are able to accommodate the multitude of factors that need to be considered in the translation process.

Yet, institutionalized translator training is a relatively new concept. Considering the fact that translators have provided translation services throughout history it has to be acknowledged that translation as a human skill can develop from a natural untrained ability and reach the level of expertise also without institutionalized educational support. The phenomenon of the so-called self-trained translators, who develop their translation competence and expertise by self-learning, points to the role played by other factors in the process of translation expertise development.

To sum up, the view of translation as a trained skill which emerges from this chapter is still far from clear. It suggests that the system of knowledge needed to translate is difficult to generalize, abstract and convert into an operative set of principles. Translation competence includes declarative and procedural knowledge and some of the knowledge stores very subtle data about how languages encode information and how they are used in social interaction. As suggested by Gile (2004) “translation is first and foremost a set of cognitive skills, though it also requires knowledge. Such skills, like other cognitive skills, are acquired and mature over a long period, generally far longer than the few months or years that translation students spend in the classroom”. Gonzales Davies (2004) pointed out that in the process of acquiring translation competence the developmental continuum starts with unconscious incompetence through conscious incompetence via conscious competence to the stage of unconscious competence<sup>14</sup>.

The transition from one stage to another is still waiting to be described and translation pedagogy could benefit from the findings. For the time being we can only assume that as a result of experiencing the entire cycle of events and processes involved in producing a translation and supported by educational feedback or critical self-reflection a new identity is gradually being granted to the novice translator (c.f. Kiraly’s (1995) self-concept). The changes are not a result of learning a handful of strategies advising how to solve translation problems but they are much more holistic and affect knowledge structures at the global cognitive level. Translation as a profession is a difficult concept to discuss due to the lack of legal regula-

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<sup>14</sup> The same route can be distinguished in the process of acquiring any other complex skill including the skill to use another language. Kirsner and Speelman (1998: 6) point out that during early stages of skill acquisition people are aware of the basis of their expertise but as they become fluent performers their expertise becomes implicit and they themselves have lost contact with the computational information underlying their performance.

tions as to who can be regarded as a professional translator. On the one hand, there are extremely high expectations imposed on professional translators by scholars, educational institutions and professional associations, but on the other hand society at large remains unaware of the quality of translation services for which the market is open to all who claim to be able to provide them. The development of the professional self in a true sense of having not only translation competence but also the professional ethics is still under-researched. Trainees are frequently left without guidance and stick to the common knowledge that one learns from experience. But what one precisely learns, in what stages and to what benefits is still subtle knowledge.

In chapter 5 I will present my proposal of viewing the process of translation skill development to reach the level of expertise as a process of learning to integrate knowledge into what I termed a Knowledge Integration Network (KIN) not in a general sense but as a response to a translation task.

## Chapter 5

*The key feature of expertise in the performance of skills is the ability to restructure knowledge*  
Séguinot (1989b: 80)

### **Becoming a professional translator: A proposal of a Knowledge Integration Network in the development of translation as a professional skill**

In view of the fact that very little is known about the actual process of TC acquisition I would like to hypothesize that the development of translation competence to reach the level of expertise is anchored in the translator's ability to integrate knowledge for the purpose of translation. Assuming that creativity is the most distinctive feature of human translation and since creativity subsumes the ability to integrate knowledge for a specific purpose it is plausible to expect that translation to reach the level of expertise requires the activation and integration of all the relevant knowledge. Therefore I would like to propose that expertise in translation relies on the translator's ability to temporarily create what I call a Knowledge Integration Network (KIN) which enables the translator to draw on all the necessary cognitive resources which are kin to the translation task at hand. These cognitive resources include all kinds of knowledge that the translator has at his/her disposal as well as the knowledge which if needed can become available through external factual research or the use of dictionaries. The ability to build such networks and benefit from them throughout the translation process develops parallel to the translator's experience. I shall expound the operating principles behind a Knowledge Integration Network as well as the assumptions it draws from cognitive and psycholinguistic theories. Next, I will use the proposal of KIN to account for the differences in which novice translators and professional translators approach the task of translating. And finally, I will present the developing translation skill from the perspective of the translator as an expert learner.

### 5.1. Creativity in translation

Robinson (1997: 51) suggests that “translation is an intelligent activity, requiring creative problem-solving in novel, textual, social and cultural conditions”. Creativity is the most distinctive feature of human translation (Delisle 1988: 37). It was initially more readily associated with the translation of highly expressive literary texts (Pisarska 1989, Piotrowska 2007) because its product was a priori creative being a translation of a poem, drama or any other literary work. However, a close investigation of the translation process through TAPs which accompanied both individual and group translation (Kusmaul 1991, 1995) showed that creative thought processes are ingrained in the translation process in general. This is probably a consequence of the fact that the use of language relies on creative processes.

Creativity in the translation process received a significant amount of attention (Kusmaul 1991, Kusmaul 1995, Mackenzie 1998, Pisarska 1989) and provides room for combining intuitive and cognitive processing. “Creativity seems to involve both subconscious production and an awareness of purpose and aim (Schottländer 1972: 160), both convergent and divergent thinking, both passion and objectivity (Joerges 1977: 171), both randomness and order (Bergström 1988: 30)” (Kusmaul 1991: 93). Usually there are four phases distinguished in the creative process (which go back to Poincaré (1913): preparation, incubation, illumination and evaluation. Depending on the phase the ratio of cognitive to intuitive processing may differ. In the preparation phase, a problem referring either to SL text comprehension, transfer of meaning or re-expression in the TL is spotted and recognized. Immediately relevant information is gathered and possibly initial solutions are hypothesized. According to Kusmaul (1991) at this stage thinking takes place on a cognitive level. In the incubation phase using the technique of brainstorming thinking is ‘mainly associative and subconscious’ and intuition seems to replace cognition and the process is driven by “emotion and passion rather than objectivity” (Kusmaul 1991: 94). At this stage a kind of physical and psychological relaxation seems to be a favourable condition. Kusmaul (1991) noted that his protocol subjects sometimes needed to interrupt the translation process by performing a divergent action like going to the toilet, getting something to drink or eat or putting a new piece of music on. Also laughter and a certain amount of fooling around create relaxation. When however, the subjects returned to the translation task they frequently produced “a bright idea” (Kusmaul 1991: 94). It



seems that “[a]t a conscious level the mind is at rest, but at the same time mental activity goes on subconsciously” (Kusssmaul 1991: 95). It is important that creative processing is fluent and while searching for a solution to a translation problem, the translator is able “to produce a large number of thoughts, associations or ideas” in a relatively short space of time. The subconscious processing is demonstrated by pauses in the concurrent TAPs produced by the subjects. The pause is frequently followed by a ‘bright idea’ or a fluent change of strategy involving the reorganization of knowledge until the solution is found and the phase of illumination sets in. At this stage emotions play an important part as if the translator was involved in a game of skill and was in fact claiming a victory over what posed itself as a problem, a psychological barrier to move forward in the translation process and closer towards the intended aim of finishing the task. The phase of illumination is closely related to the next phase of the creative process, the evaluation when the new ideas are immediately subject to evaluation according to how appropriate they are as solutions to the problem recognized in the preparatory stage. If they are accepted the translator will move on, if however they are rejected the creative process will start again. Kusssmaul (1991) observes that it is important that all the phases of creative translation do not follow in a sequence, but are rather interrelated and should be perceived as “moves backward and forward, in loops, as it were, and some phases are gone through repeatedly” (Kusssmaul 1991: 97). Evaluation is very closely related to illumination and to the preparatory stage where the specifications for evaluating the creative product of incubation and illumination are formulated. The assessment of the form accepted as an initial solution with respect to its contextual and situational appropriateness (the specifications) is in fact a metalinguistic act (see chapter 3) carried out by the internal monitoring device operating to ensure adequate translation quality. Kusssmaul (1991) observed that skipping the phase of evaluation may lead to a loss of good ideas produced during the stage of incubation and illumination. Kusssmaul (1991) concludes by way of answering the question of how to teach creative translation, “The most obvious observation is that we must take care that our students always preserve a critical and evaluative attitude toward their ideas that come to their minds. At every moment of the incubation and illumination phase they must be able to step back, as it were, and observe what they have been doing” (Kusssmaul 1991: 94). There are, however, certain conditions that need to be provided to encourage creative translation, such as a positive attitude towards the task,

appropriate level of difficulty, encouraging atmosphere in the class, lack of harsh criticism, techniques for removing psychological blockages by divergent thinking or providing relaxation, encouraging fluency of thinking and flexibility as the mental abilities vital for creative thinking. Goleman in his most recent digital book *The brain and emotional intelligence* (2011) does say, “the neural dynamics of creativity tell us why putting an innovative puzzle aside can be part of the solution”. Kussmaul (1991, 1995) admits that training creative skills is an ambitious aim but improving such basic requirements for translation as “the ability to find synonyms or semantically related words for a given expression” or “the ability of abstracting meaning from its linguistic form” should have positive effects on the overall translation skill. It is also possible that fluency and flexibility might be trained by other than linguistic tasks. Although Kussmaul (1991) suggests that in this respect psychologists might have some suggestions, the issue has rarely been raised in TS literature. Even making students aware of the creative processes which go on in their translating minds is some achievement which “may at least help them to guide their own mental activities to some extent” (Kussmaul 1991: 99).

Creativity as an undisputable aspect of human translation however should go together with the awareness of the constraints which mark out its limits. These include the SL text, the linguistic limitations of the TL system, the communicative expectations of the TL text receivers, and the limitations of the processing mind (Whyatt 2000). Neubert (1997) called this kind of constrained creativity ‘derived creativity’. To quote:

A translation is a new creation, even though it is guided by its source text and the requirements of the translation situation. Any experienced teacher of translation can verify this claim – the same source text assigned to a dozen students can yield a dozen, perhaps all equally good, translations. Each is an expression of the differing experiences, knowledge and creative talents of their respective translators. Yet, they are all, recognizably, derivable from the source text (Neubert 1997: 17).

It is possible that the awareness of the constraints plays an important role at the evaluation phase when the potential solutions are assessed, accepted or rejected<sup>1</sup>. The evaluation phase of the creative problem-solving is when

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<sup>1</sup> Neubert (1997: 18) notes that very little is known about the differences between original creative language use and the derived creativity of translators or interpreters.

the translation process meets its product. It is possibly this particular meeting point that is a vast area where translation pedagogy has a lot to do to encourage future translators to self-assess, self-reflect on how well they guided their creative-problem solving, how well they manoeuvred within the space marked out by the constraints. Vital questions have to be answered here: How well is the translation produced meeting the reader's expectations? How well is it respecting the author's intentions, and what does it say about the translator himself/herself? As observed by Neubert (1997), "A translation is not created from nothing; it is woven from a semantic pattern taken from another text, but the threads – the linguistic forms, structures, syntactic sequences – are new" (Neubert 1997: 17). Maintaining a proper balance requires a variety of creative strategies including transposition (syntactic reordering), modulations (lexical recasting), compensation and a wide range of semantic shifts when a metaphor is demetaphorized or a generalization is specified (see Neubert 1997: 19). The creativity ingrained in the human mind and required in language use in general and in translation in particular is unique and highly individual. Creativity is sometimes demanding and sometimes frustrating when we look for the one and only word in our mental lexicons and in all the available resources. Creativity is a state of mind which is closely linked to emotions and feelings (see Kussmaul 1991) brought about by the ups and downs of creative problem solving. In other words, it is the creative thinking which combines the physical, intellectual and emotional energies and capacities of the translator. There is a more or less general consent that translation is first and foremost an intellectual activity (Gile 1995/2009). Yet, the other two dimensions, the physical execution of the translation process either in writing or in speech and the emotional affective factors which must play a huge role in driving the translation process to the stage of the actual physical production have not been given just attention. Still, when translating all three aspects, the physical, the intellectual and the affective processes are involved in a subtle interaction to achieve an intended aim of producing a translation. As suggested by Kussmaul (1991) they all play a part in enabling creative thinking which is required in human translation. Although some people might rightly argue that different texts require different amounts of creative thinking, it would be dangerous to claim that an instruction manual does not require creative thinking. Setting off from creativity as the most distinctive feature of human translation, it is my intention to show that the human ability to translate in order

to reach the level of expertise has to involve the ability to integrate knowledge needed to perform each and every translation task. In brief I call it the ability to build an adequate Knowledge Integration Network (KIN) which provides all the necessary cognitive resources to allow for creative problem solving which then combines the physical, the intellectual and the affective processes.

## 5.2. Theoretical foundations of KIN

Generally the proposal of KIN is embedded in cognitive studies which allow to view one's linguistic knowledge (here one's bilingual knowledge) as a part of general knowledge structures. Some of the knowledge that we have has been consciously learned and some has been incidentally acquired (i.e., the knowledge of our native language) throughout our life. Both conscious (explicit) knowledge such as general knowledge of the world, specialist knowledge of certain domains, e.g., biology, economy or history and incidentally acquired knowledge is a collective product of our experience as physical, intellectual, emotional and social beings. Altogether it forms our intellectual human capital that we utilize in the form of abilities or skills with a different degree of success in our everyday life and in our professional life. Since the knowledge that we have (including procedural knowledge needed to execute certain actions) is stored in our memory the question whether and how we use it is in a way equivalent to the question of how well we can navigate our long term memory, retrieve and activate what is needed<sup>2</sup>. As pointed out by Donald (2007a: 220) what we have stored in our memory is inactive, just like a DVD or a book in a library. It is "a dead record" which can be activated by priming, and it will start to live again only when it is brought back into our awareness and becomes activated. It is only following this unique resuscitation procedure carried out within our neural networks and done as neurologists would insist thanks to the chemical molecules and the brain's electric circuit (see Dudai 1989, Eichenbaum 2002, Kalat 2007, 2010, Donald 2007a, Squire and Kandel 2009) that we can make use of our knowledge when it is needed to perform a task at hand. This ability to integrate knowledge and being able to use it

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<sup>2</sup> As advocated by Hebb (1949) memory storage most likely takes place in distributed networks, i.e., "assemblies of cells, distributed over large areas of cortex, work together to represent information" (Squire and Kandel 2009: 10).

when it is needed according to many scholars is what constitutes human intelligence. Needless to say, the concept of intelligence is very complex and psychologists argue which is the most appropriate framework. Some view it as general intelligence (the 'g' theory) while others view it as a cluster concept of multiple intelligences (see Waterhouse 2006: 207, Gardner and Connel 2000: 292). Furthermore, the concept of intelligence has itself recently undergone some significant changes and as a result our understanding of the concept has been expanded to include emotional and social intelligence (Goleman 1995, 2006) which when linked with personality research provides vast grounds for explaining how we perceive reality, interact with others and process incoming information.

As pointed out by Bell (1991: 230), the translation process crucially depends on our ability to process information from our senses (the physical domain) when we read a SL text with our eyes or fingers, in case of the blind, or when we read the gestures of a signing person, in case of the deaf, and convert what is made available through our senses into meaningful information in our mind. Then when translating we have to carry the informative content over into a TL system where again with the help of our senses we type a translation constantly checking with our eyes to see how well we are doing. In this respect all the issues referring to how humans process information, organize, store and retrieve knowledge are essential to the human skill to translate. Wilss (1996) insisted that translation is a knowledge-based activity. It therefore seems justifiable to suggest that the development of translation as a human skill depends on the ability to activate and integrate knowledge which is needed for a particular translation task. In translation however, in contrast to monolingual tasks, this process of integration will necessarily involve the integration of two language systems, followed by the conscious and controlled inhibition of the SL system and activation of the TL system (see the discussion on language control in chapter 2). It is my intention to suggest that the proper balance between sufficient inhibition of the SL system and sufficient activation of the TL system is facilitated by an adequate KIN temporarily created in the translator's mind in response to a given translation task.

Although KIN reaches beyond linguistic (or bilingual) knowledge into our complex cognitive database stored in LTM (Long Term Memory) and accumulated throughout our lifetime, it seems plausible to expect that it will produce a priming effect needed for the actual formulation and articulation in the form of a TL text. In other words an experienced transla-

tor when reading a SL text for translation will automatically place the text within his/her knowledge structures and through a ripple effect, or spreading cascaded activation as it is viewed in connectionist models<sup>3</sup>, some lexical items will become activated and ready for access when the production of the target text starts. A similar kind of activation but spreading bottom up rather than top down was suggested by Seleskovitch and Lederer (1995) in interpreting practice and termed ‘cognitive complements’. The authors suggested that on hearing a sound and identifying it as meaningful words or phrases not only linguistic knowledge and experience with the item are activated but also other past experiences which have been individually associated with the sound. All the activated and integrated knowledge will participate in making sense by the interpreter (Seleskovitch – Lederer 1995: 225). Similar Kiraly (1997) talks about “an intuitive – or relatively uncontrolled – workspace (...) in which various types of information from a more permanent knowledge store are synthesized with information from source text input and external resources” (Kiraly 1997: 151). Following this line of reasoning the proposal of KIN encompasses the entire translation process not only the stage of comprehension and stresses the priming effect on the activation of the TL system.

Since, however not all the knowledge that might be needed is available in our internal memory store, KIN might signal the need to reach into the external memory storage (books, dictionaries, encyclopedias, libraries, data bases, the internet). This option is unavailable to interpreters for obvious reasons, for the translators of written texts researching is a part of everyday practice. Finding out facts that we need to know we simultaneously refresh in our LTM or get hold of the words and structures which are used to express these facts. For example, a translator working on a translation of a scientific paper entitled, ‘Clogging of deposits in the vadose zone under infiltration conditions (Dębina water intake, Poznań)’ without prior factual knowledge of the processes involved will become aware of the lack of knowledge stored in his/her internal memory which would suffice to create an adequate KIN and will first search for information about the processes described in geology creating in this way a KIN which will consist of facts and a stock of previously unknown vocabulary. This process of building KIN most likely takes place every time a transla-

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<sup>3</sup> Connectionist models view behavioural or mental phenomena as processes emerging from interconnected networks of simple units (cf. Marcus 2001).

tor is faced with a new text. When translating highly specialized texts the process of creating an adequate KIN will involve intensive research irrespective of the direction in which we translate, especially if our factual knowledge of the field is limited. In simple words the translator will ask and answer some essential questions: ‘How much do I know about the subject matter?’, ‘What kind of knowledge is at my disposal?’, ‘Do I have the TL vocabulary to translate the text or do I need to do some research to access and integrate all that I need to know to produce an adequate translation?’ (Stolze 2004: 44). Various scholars implied the knowledge integration networks which occur even during the first encounter with the SL text. For example, Holmes (1988) suggested his mind-map theory, Lörcher (1992) wrote about expectation structure and Hönig (1991) discussed the importance of macrostrategy which allows one to see the text not only as a whole but also as a part of a larger background (e.g., field or domain). The need to integrate all the necessary knowledge for the purpose of translating has been a tacit assumption but not much attention has been devoted to its effect on the actual linguistic formulation and execution of the translation process.

The ability to build an adequate KIN which I hypothesize as a crucial part of the human ability to translate at the level of professional expertise apart from activating all the knowledge which is kin to the task at hand is assumed to prime access to the linguistic means needed to produce a particular translation. In other words, by activating and integrating all that is needed to understand the SL text, it is expected that the activation and integration achieved at the translator’s ‘Common Underlying Conceptual Base’ (Kesckes and Papp 2000, Paradis 2007) will spread down from the level of conceptualization to the level of the target language infrastructure activating the links in the bilingual mental lexicon. The process of the TL text production will then run fluently with lexical access and language control making sure that only the most adequate matches are chosen and articulated, i.e., produced. Since every lexical item carries detailed specifications about its syntactic behaviour and pragmatic bearing, the process of writing down a translation can resemble a very sophisticated jigsaw puzzle. Some pieces, e.g., words which are chosen do not match the semantic pattern and are replaced by others, a piece which is chosen, e.g., a verb to express the meaning of a noun dictates the route and further lexical selection and grammatical decisions. Some pieces do not have any matches, for example in the case of conceptual gaps in the TL system

(Whyatt 2006b) and require compensation strategies. As put by Levý there is a constant chain of forks in the road and if the translator decides to choose one direction some choices are limited by the limits of the TL. The TL text is then in Neubert's view (1997: 17) woven from the semantic patterns of the TL but with different threads. It is important, however that the threads are ready for use, within the translator's reach. It is my intention to hypothesize that this readiness is achieved when an adequate KIN is created upon reading a SL text for translation and taking in all the available information about the TL text which has been commissioned by a client. Fillmore's (1977) conception of the text as a frame which has to be unravelled into a meaningful scene is an adequate metaphor for the proposed KIN which goes a bit further and postulates the mental readiness for re-framing its content in the form of a translation. It is then closer to Holmes (1988) and his mind-map theory.

By proposing KIN I hypothesize that with experience the human skill to translate relies on the ability to activate and integrate all the relevant kinds of knowledge for a particular translation task. The ability to activate and integrate relevant knowledge develops as a product of translation practice. The proposal of KIN in the process of translation skill development is based on a number of assumptions derived from cognitive psychology, learning theories and memory research which explain the developmental nature of the translator's ability to create an adequate KIN for a task at hand. In translation like in any other action that we perform there is a multitude of factors which are involved and which will have to be accounted for by the person who performs the action, in our case the translator. Complex skills such as translation require an integration of declarative and procedural knowledge in a synchronized performance involving our body (senses) and our mind (the intellect and emotive factors). In other words, translating requires an efficient working network which will reach into our long term memory archives while at the same time keeping in conscious touch with what is going on in our working memory. To understand how translators learn to cope with these cognitive demands it is essential to make some assumptions drawing from various relevant disciplines.

### 5.2.1. The human mind as a synchronized system

The first assumption is that the human mind works as a synchronized unified system in order to solve what poses itself as a problem on the way to



achieving an intended goal, in our case producing a translation of a SL text. As pointed out by many TS scholars and proved by the lack of success in Machine Translation, translation tasks abound in open ended problems, and the translator in order to solve them has to draw on all relevant cognitive resources, and by being creative and flexible has to find a relevant solution. By producing a unique Knowledge Integration Network (KIN) for each and every translation task the cognitive resources are ready for use. The literature on translator's cognitive resources, i.e., on what translators should know frequently generates extensive lists (Korzeniowska and Kuhlaczak 1994), but it rarely grants to the translator the decisive power over which knowledge will need to become activated and integrated for a particular task. Similarly, there is little research into how the ability to integrate knowledge changes with the repeated experience of translating. Cognitive psychology is of help in this respect. As observed by Donald (2007b: 74), "any learned behaviour patterns involve functional rewiring of the brain, in the sense that functional circuits are created that did not exist before". Consequently, these new functional circuits can become stored in our LTM and recalled to aid our performance in similar activities. Whether or not the translator will learn from experience depends on his/her ability to store and withdraw relevant information, pattern or procedure when it is needed. The synchronized effort which is needed and the strategic approach to the task of translating might be the reason why translation has been frequently compared to a game of appropriate decisions (Levý 1967, Gorlee 1994).

Comparing translation to a game is by no means a novel idea going back to the mathematical models of game theory described by Neumann and Morgenstern (1944). Dinda Gorlee (1994: 67) in her book included a chapter entitled "Translation and the semiotics of games and decisions" where she compared translation to games such as jigsaw puzzles and chess. Other analogies of translation as a game often include a crossword puzzle (Newmark 1999) and more recently translation as a game of billiards (Rihimaki 2005). This comparison is useful when looking at translation as a purposeful task which requires the translating mind to work as a synchronized unified system to reach the aim of producing a translation. In translation like in a game of skill (not luck) the translator's mind is focused on the task and his/her actions are synchronized and goal oriented. In this respect, a translator fits into the description of any rational player, who, "...takes into account the possible consequences of each of the courses of action

open to him [and] is aware of a certain preference order among the consequences and accordingly chooses the course of action which, in his estimation, is likely to lead to the most preferred consequence” (Rapoport 1961: 107-108 quoted after Gorlee 1994: 72). Since however many problems are novel and unique like in the case of metaphors or neologisms which need to be translated problem solving will involve also an element of risk-taking just like in a game of skill. The success of the game [translation] depends on the knowledge and skills which are needed to perform the task and made available in the translator’s mind via the process of building a relevant KIN, which also allows to calculate risk-taking (i.e. translating Polish *pierogi* as ravioli or leaving it as proud Polish *pierogi* on an English version of a restaurant menu). How much knowledge can be made available in the translating mind is not only a product of the translator’s experience (less experienced translators might translate *pierogi* as ravioli focusing on finding any equivalent similarity known in the TL conceptual repertoire while more experienced translators will leave the domestic word and inform about its unique conceptual value). The amount of knowledge which can be made available for the translating mind working as a synchronized unified system is also subject to the cognitive constraints of the human mind, our second assumption behind the proposal of KIN.

### 5.2.2. Limited capacity of the human mind

“The human mind is a limited capacity processor” (McLaughlin and Heredia 1996: 213) which means that our conscious cognitive capacity is in a limited supply and once exhausted it will have a negative consequence on our performance. This principle was used by Gile (1995: 152) who divided the translation process into four components (efforts): comprehension, production, memory and coordination and concluded that an imbalance in the distribution of mental energy between the four components will tax the translator’s performance. While agreeing that this is likely the case, especially with inexperienced translators, it has to be acknowledged that each of Gile’s efforts is in itself a complex process which relies on the retrieval and integration of information stored in the human memory. As Whyatt (2010: 89) suggested the study of mental effort management in the process of translation performed by inexperienced translators points to their major problems with cognitive control over the translation process itself. Due to their limited experience in translating, inexperienced translators expense a

substantial amount of their cognitive attentional resources for conscious control and coordination of the translation process. This is quite typical of anybody learning to perform a new complex skill. With practice, however, including all the stages of the performed action such as planning, execution and rehearsal (Donald 2006) certain parts of the complex skill due to the mind's tendency to divide labour become automatized, do not require conscious control and free some attentional resources. By way of analogy, let us think of reading. "When we learn to read our native language, for example we initially move haltingly from word to word, but after practice we read quickly, moving the eyes to a new location about four times a second and taking the meaning from more than 300 words in one minute" (Squire and Kandel 2009: 202). Like in other cognitive skills a learning individual develops "a feel for how to do the task that is there are actually no facts memorized about the task but a general sense or intuition about how to proceed" (Squire and Kandel 2009: 203).

However, Donald (2007b) stresses that for certain actions to become automatic practice has to be combined with conscious rehearsal, awareness and integration of what in the skill is new to the learner with what is known to the learner. It is only then that automaticity will occur as a 'by-product' of practice. The interplay between controlled, conscious, cognitive and automatic, intuitive processing has frequently been acknowledged in translation studies (Hönig 1991, Kussmaul 1991, Mackenzie 1998, Cronin 2005, Kiraly 1997). For example, Toury (1995: 251-252) suggested that

[i]n extreme cases, they [translators – BW] may in fact develop automatized ways of handling specific problems, even a series of fixed solutions which are mobilized whenever a certain problem occurs. To be sure, this is often an efficient way of evading a problem rather than plunging headlong into it, thus leaving more time and reserving more energy for less proceduralized parts of the task. Such shortcuts seem to form an important part of a translator's acquired ability to cope with problems in real life situations, involving, e.g., time pressure, growing fatigue, incomplete knowledge, and much more (Toury 1995: 251-252).

These 'mental shortcuts' suggested by Toury (1995) allow the translator to work within the limited capacity for conscious control (Jääskeläinen & Tirkkonen-Condit 1991: 89, Jääskeläinen 1999). The ratio between consciously controlled processing and automatized procedures is described and explained by cognitive learning theories.

Anderson (1985) views the learning process as “the movement from controlled to automatic processing via practice (repeated activation)” (quoted after Mitchell and Myles 1998: 86). Robinson (1997) admits that “experienced translators are fast because they have translated so much that it often seems as if their brain isn’t doing the translating – their fingers are... the target language equivalent terms come to them automatically, without conscious thought or logical analysis” (Robinson 1997: 49). This view would perhaps explain Paradis’s (2009) claim that experienced interpreters bypass the conceptual level whereas the less experienced ones interpret via conceptual mediation. A point needs to be raised, however whether the speed of interpreting is in fact synonymous with automaticity and whether the fact that equivalents can be recalled as-if automatically excludes the option that a conceptual match is nevertheless checked and approved (see chapter 2 on lexical access).

It seems that the ratio between consciously controlled processing and automatic processing performed within the limited capacity for conscious control in the human translating mind is determined by the translator’s ability to create an adequate KIN which will decide about the mental effort management throughout the translation process (see Séguinot 2000, Jakobsen 2005). Some processes will be carried out by automatized procedures (i.e., when translating into L1) and others will be carried out at the level of consciousness, e.g., self-monitoring for adequate meaning transfer). It is only through automatizing certain subtasks that a complex skill such as translating or interpreting (Chmiel 2006: 49) can be developed to the level of expertise (Wilss 1996: 102). As observed by Donald (2007b: 75) when we operate in the conscious mode we cannot tolerate distractions and we usually trade off accuracy and speed in tasks which exceed our capacity especially when we have to multi-task like in translation. This is true of novice translators, speed and accuracy suffer and the task is time consuming and tiring. When the same task is performed in an automatic or even semi-automatic mode we can tolerate disturbances and distractions. Yet, as noted by some scholars automaticity does not necessarily mean that experts always perform the same task faster than non-experts. Jääskeläinen (2010: 220) notes that some researchers (Sirén and Hakkarainen 2002) have made the observation that translation in fact does not become easier with experience which might seem to contradict common expectations. Similar results were reported in a creative writing task study by Bereiter and Scardamalia (1993: x) in which “given the same as-

signment, experts would work harder and do a great deal of thinking” (quoted after Jääskeläinen (2010: 220). It is possible that the greater effort in ‘thinking’ (building a KIN) has not resulted in a faster performance but most likely in a different performance and most probably more likely to result in a higher quality product.

Many translation scholars who talk about the ratio between cognitive control and automaticity in the translation performance of expert translators mention the role of intuition. Hönig (1990: 157) calls it knowledge that we are not aware of and Robinson (1997) talks about gut feeling. Squire and Kandel (2009: 203) say, “Much of what we call “intuition” is probably learned and is based on nondeclarative memory which stores proceduralized automatic action programmes”<sup>4</sup>. It has to be added, however that even automated actions are goal oriented and therefore they have to be monitored in awareness to make sure that they serve the common purpose, in our case translation. In this respect a broad concept of consciousness is needed. Different action programmes or subtasks will require a different amount of attention. Donald (2007b) talks about the attentional hierarchies of different semi-automatic actions. Consciousness itself according to Donald (2007b) is “not a unitary phenomenon, a matter of all or none. Consciousness is a graded hierarchy of up-and-running routines. There is a “vivid core” of sensory awareness and various other elements and routines, running concurrently under meta-cognitive supervision. At any given moment the meta-cognitive observer can suddenly broaden the reach of awareness or focus it on some particular detail” (Donald 2007b: 79). This brings us to the third assumption underlying the proposal of KIN, conscious and deliberate meta-cognitive control.

### 5.2.3. Meta-cognitive supervision and goal orientedness

Translation is a conscious purposeful activity, a service provided for somebody else than the translator, being it an individual client, an institution, or a community and as such it is generally expected to be a product of skilled performance. In complex skills, such as translation certain ac-

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<sup>4</sup> Chmiel (2006: 49) mentions that interpreters sometimes report on ‘great revelations’, brilliant ideas on how to render a pun and explains after MacLeod (1998: 59) that even seemingly unattended stimuli may undergo extensive perceptual processing and trigger activation at the conceptual level possibly priming access to a “revelation-like rendition of a pun”.

tions can be performed in consciously controlled and in automatic modes (Toury 1995, Hönl 1991) but all the goal oriented effort is constantly monitored in awareness<sup>5</sup> to assess its contribution, spot errors and correct them with respect to their compatibility with the KIN performed in the translator's mind who has read the SL text. Neubert (1997) explains this need for monitoring the process comparing it to monolingual language use:

Translators and interpreters, like editors, are quite aware of not expressing themselves when they practice their craft. When searching for TL means of expression, it is true, they exploit their own repertoire as well as a variety of resources, both bi- and monolingual. But instead of just monitoring what they are saying or writing as straightforward L1 or L2 speakers would do, they are continually matching what they are about to say or write or actually do say or write with what they have heard or read before in the source text. There is a continual return to the source text in actuality, and in memory (the trace in memory is all the interpreter may have) (Neubert (1997: 18-19).

The proposed KIN suggests that also in written translation the memory has been activated and the resources integrated into an active KIN to provide means for an adequate goal oriented monitoring and meta-cognitive supervision of the translation process. The SL text in its physical presence is available to refresh the network and keep it active as well as to supply with new previously unnoticed information which will revise the dynamic KIN and readjust its weightings. In the entire process complex control mechanisms operate to ensure first and foremost that the two languages are activated but at the same time kept clearly apart to avoid interference. As stressed by Green (see chapter two) language control uses cognitive resources.

Drawing on the ideas of Donald (2001, 2007a, 2007b) on complex skills, the proposal of KIN assumes that conscious and deliberate meta-cognitive control is an essential part of the human ability to translate at the level of expertise. It includes anticipatory planning when the translator is preparing to translate, meta-cognitive monitoring of self-action when the translation is in the making and finally, rehearsing when the translator is improving the final product (TL text) and performing self-critical transla-

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<sup>5</sup> Wilss (1997: 89) talks about translator awareness, "If we want to encompass adequately the wide-ranging field of human translation, it is necessary to include in translation studies (TS) the concept of translator awareness (or translator consciousness, for that matter)".

tion quality assessment, revising and editing the final product. In other words, whether we plan, execute or rehearse conscious self-regulation is constantly switched on “high up in the system from which it can intervene and spot problems at a lower level” (Donald 2007b: 75). Donald (2007b) gives an example of the piano player who while giving a concert will concentrate on his/her interpretation, not on the sequence of melodies or finger movements but he/she will nevertheless notice if suddenly something happens to one of the fingers which will affect the overall performance. Needless to say, the same piano player years ago had to acquire the complex skill by practicing the hands and consciously controlling the movements on the keyboard. The novice and the expert translator share a similar history before they can make the most of their ability to integrate knowledge and produce a professional excellent translation. Their expertise, however would not have developed without their conscious effort to integrate different elements of their actions, some of which will through practice and extensive rehearsal become “automated action-programmes and eventually make up a coherent and seamless patterns of complex behaviour, such as driving a car or dancing” (Donald 2007b: 75), or translating.

It is possible that in the development of translation as a human skill it is precisely the notion of the internal ‘meta-cognitive observer’ which needs more attention from TS. The awareness of this meta-cognitive faculty has been voiced by some scholars including Bell (1991) Toury (1995)<sup>6</sup>, Gile (1995), Hansen (2003), Kiraly (1995). The meta-cognitive supervision over the translation activity or as put by Holz-Mäntäri (1984) the whole translatorial action will rely on KIN produced for a particular translation task and as such remains an essential part of the human ability to translate at the level of expertise. This ability is not given but develops over time with repeated experience of translation and a sizable amount of reflective thinking.

To sum up, the proposal of KIN, that is the ability to integrate knowledge for translation assumes that the human skill to translate relies heavily on meta-cognitive capacities to self-organize the translator’s knowledge base in response to a novel translation task. It takes a holistic approach to stress the synchronized human effort needed to translate, it respects the at-

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<sup>6</sup> Toury (1995: 248) talks about ‘an internal control mechanism which develops inside the translator first in response to the environmental feedback and later through the translator’s effort to ‘consider potential responses’ to the translation as a final product.

tentional limitations of the human mind with the subsequent need to automatize certain actions and make use of external memory resources to access and acquire knowledge that is unavailable to the translator at the time when it is needed. KIN stresses the meta-cognitive supervision conducted within a broad concept of consciousness. It is the translator's ability to integrate knowledge for every specific translation task which establishes the essential link between the translator's LTM and WM (Working Memory) which "takes in" the SL text to be translated. KIN relies on a common principle in human social cognition according to which what we encounter as new is in our effort to make sense integrated into a whole range of familiar old scenarios (Donald 2007a: 220, Bartlett 1932). To perform complex tasks humans have the capacity for the temporal integration of knowledge both declarative and procedural including all the required sub-skills learned or acquired so far (see Bell 1991: 249). This temporary integration "allows the mind to oversee short-term events and episodes from a deeper background vantage point, while bracketing the fast moving events in the foreground, and placing them in an accurate context"<sup>7</sup> (Donald 2007a: 220).

For the translator the fast moving new event is the SL text which is opening gradually as the eyes run through the text, simultaneously and possibly without conscious control various experiences are awakened in the translator's LTM<sup>8</sup>. The 'awakening' takes place in both episodic and semantic memory with old schemas, scripts being activated like past stories we have heard or experienced ourselves (Fillmore 1977, Sperber and Wilson 1986, Schank 1986, Squire and Kandel 2009). In this respect the translator is just a reader of the SL text but as studies suggest (Whyatt 2003, Stolze 2004) the awareness of the purpose to translate the text bears consequences on which knowledge domains will be activated and integrated into a dynamically created KIN for translation. In translation a task-specific KIN offers the means for the conscious meta-cognitive control which will provide global supervision over the translation process executed to result in a TL text as a product. The question which knowledge domains will become activated and integrated for the translation to run smoothly, with adequate division between consciously controlled actions and automatic or

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<sup>7</sup> In psycholinguistic terms this means top-down processing (see Bell 1991: 249).

<sup>8</sup> Wilss (1999: 220) spoke of lack of memory research in Translation Studies and noted, "Our main intellectual asset is our long term memory: it is a link between perception and reflection, and makes translation/interpreting processes of varying complexity, under varying conditions (text type, client's instructions, etc.) possible".



semi-automatic routines, depends on the stage a translator has reached on the developmental continuum.

### 5.3. Developmental nature of the ability to integrate knowledge

What exactly has to happen for a novice who struggles to transfer meaning across language barriers to become a confident self-fulfilled expert translator still remains in many aspects unclear. Are there any stages in the evolution of the professional skill to translate? What is the average time that is needed to develop self-confidence as a translator? Which aspects of the job are the most difficult to understand for trainee translators? Which aspects of the expertise are the most difficult to share with novices? Does translation get easier with experience<sup>9</sup>? Translation process studies despite the criticism they frequently have received about their methods (see Tirkkonen-Condit and Jääskeläinen 2000, Jääskeläinen 2010) have revealed some aspects of how novice and professional translators translate. It therefore can be assumed that comparing what we know about the similarities and differences between novices and professionals will inform us, or at least will provide some insight into, what stretches between the two stages on the developmental continuum. In other words the aim is to see whether hard work will bear ‘beautiful fruit’ (Jääskeläinen 1996).

By proposing KIN in the development of translation expertise I hypothesize that what divides the novices from the professionals is their ability to integrate knowledge. The ability to produce a KIN for a specific translation task is responsive to experience in the sense that the translator’s ability to create KINs and benefit from the integrated knowledge network develops over time and in correlation with practice and self-reflection. It is a slow process. As a result it can be hypothesized that novice translators have serious problems with building an adequate KIN. They frequently integrate only the most obvious knowledge structures, the physically visible and the physically needed bilingual knowledge, acting on the common misconception that it is sufficient to translate. Alternatively, it is possible that learning to integrate one’s bilingual knowledge for the purpose of using it for translation

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<sup>9</sup> Although some scholars suggest that “translation does not become easier with growing experience and expertise (Sirén and Hakkarainen 2002: 71) it is not specified what easier means, does it mean faster or less complex.

is the first stage in the process of the evolution of translation as a human skill. In the very early stages (see chapter 2 on L2 learners as translators) of experiencing translation L2 learners in fact integrate only the lexical knowledge of their L2 and look for word-for-word semantic correspondences, frequently disregarding pragmatic functional aspects. It is possible that a contributing factor is the lack of conceptual proficiency in the Common Underlying Conceptual Base (Kesckes and Papp 2000, 2007) which has to account for cross-cultural relationships of similarity, difference or partial resemblance. Yet with exposure to translation tasks, L2 learners and users fairly quickly learn a holistic approach to a SL text and their TL counterpart which has to function in a TL communicative reality (see Gile 2004). With experience and appropriate corrective feedback (or self-critical reflection), e.g., as translation trainees they learn to build complete networks of knowledge, first under the external guidance of their teachers/trainers (or under their own supervision if they are themselves expert learners). Later when they start to provide translation services in their professional life they rely on their own meta-cognitive supervision. To explain in detail the developmental nature of the ability to build and use KINs in translation let us look at how inexperienced and professional translators differ in their approach to the task of translating a text and how differently they handle the translation process leading to the physically present product (Jääskeläinen 2010, Norberg 2003, Schmidt 2005).

### 5.3.1. Approaching the SL text

Translation process studies have provided substantial evidence that student translators approach the SL text which they are about to translate in a different way than professional experienced translators (Kusmaul 1995, Asadi and Séguinot 2005). First of all, novices focus on lexical processing taking 'word' as a translation unit (Lörscher 1991, Hansen, 2002) and they tend to rely on semantic meaning disregarding the role of context and pragmatic situational sense. Whyatt (2003) showed that some inexperienced translators tend to read aloud or whisper to themselves adding in this way another modality to enhance comprehension. Beginning translators sometimes start translating without reading the entire text prior to the onset of translation. Some like to underline unknown words or immediately use a dictionary. Their focus is at the micro-level of the text and they rarely cross sentence boundaries when interpreting the meaning of the SL

text items (Whyatt 2000). They initially show very low text awareness, disregard pragmatic markers to identify the type of discourse the SL text belongs to. Jonasson (1998) showed that novice translators ignore the macro-level information referring to cohesion, coherence, purpose and function of the SL text (and the TL text) as well as its text type and discourse markers to indicate the level of formality (style). In other words they process a SL text in a horizontal fashion (see De Groot 1997) with excessive bottom up processing rather than integrating it with top-down processing (Kussmaul 1995). The integration of top-down processing with bottom-up processing is assumed in the proposal of KIN and in many metaphors capturing the essence of interpretative processes in translation including the mind-map theory of Holmes (1988), Levy's text-as-a-picture-of-reality (1967) or Pym's (1992) text-as-an-object-to-be-interpreted constructs. The integrative principle is also present in different terms ascribed to approaching the SL text for translation such as 'positioning the text' (Stolze 2004) or 'the stage of orientation' (Jakobsen 2002, Buchweitz and Alves 2006).

In contrast, when reading for translation professional translators focus on the macro-level first. As pointed out by the TAP research (Jonasson 1998, Bernardini 1999) their approach is functional and in their text analysis prior to the onset of translation they first pick up the macro-level information. Nord (1988/1991) suggested that it includes the following chain of questions: Who is to transmit to whom, what for, by what medium, where, when, why, a text with what function? On what subject matter is he/she to say what (what not) in which order, using which non-verbal elements, in which words, in what kind of sentences, in which tone, to what effect? (Nord 1991: 144). In Holmes' (1988) words the professional translator is from the very first encounter with the SL text creating a mental map, a macro-strategy (Hönig 1991) or an expectation structure (Lörscher 1991) which will guide him/her on the way to the TL text.

Taking the above arguments into account it can be tentatively concluded that the difference in the way inexperienced translators and experienced professionals approach the SL text shows the underlying difference in their ability to build and use an adequate KIN which will affect the distribution of attentional resources during the first reading. The novices seem to integrate only their bilingual knowledge and more precisely their linguistic knowledge of both languages which is indicated by the fact that they spot unfamiliar words, underline them or look them up in a diction-

ary. They proceed in a linear form oriented way and their focus on form overrides making sense (see Lörcher 1992). The professionals activate their memory and integrate the new SL text within their entire knowledge base (see Sperber and Wilson 1986, Whyatt 2003). In other words they see it as a whole. To quote: “The holistic approach to texts for a translator means that when positioning the text the translator instead of or prior to “text analysis” will ask: What are the knowledge elements at my disposal? Am I able to understand the message? From which country, which social group does it come? What do I know about that culture?” (Stolze 2004: 44). One could add more questions that a professional translator asks and answers. The reading is goal-oriented and the translator with experience establishes how the SL text fits in with what he/she knows (can access from his/her LTM) and what knowledge will have to be acquired to complete the KIN needed to translate. All the macro-level questions (quoted above from Nord 1991) come in a kind of dialogue with the translator’s knowledge base (see Whyatt 2003). This interaction shows that a temporary KIN is in the making which integrates the new SL text with the translator’s cognitive repertoire. Seleskovitch (1978) and her idea of deverbalization<sup>10</sup> or the use of visualizations described by some scholars (Kusmaul 2005<sup>11</sup>) can be taken as metaphors describing the integrating principle of a KIN activated in the translating mind.

The novice for whom translation is a fairly novel experience will lack the ability to activate all the relevant knowledge domains and will focus on the most obvious integration of linguistic knowledge of the SL and the TL. This is also the case possibly due to the fact that the bilingual knowledge in itself needs all the cognitive attention from novice translators who in most cases are L2 learners rather than proficient L2 users (see Cook 1992). When reading a SL text in their L2 all or most of their cognitive capacity will be taken by working out the meaning. If the SL text is in their native language the comprehension effort (see Gile 1995) is reduced (at least in texts not requiring any domain specific knowledge) but problems occur at the stage of meaning transfer which will still remain horizontal (see Kus-

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<sup>10</sup> However, apart from hypothesizing deverbalization the idea how the linguistic messages are processed into deverbalized carriers of meaning and what the meaning carriers are was not explained by Seleskovitch (1978).

<sup>11</sup> Kusmaul (2005) having analyzed dialogue TAPs and making use of the cognitive notions of scenes and frames and prototypes arrived at the conclusion that “visualizing details of a scene helps translators to arrive at creative translations” (Kusmaul 2005: 378).

maul 1995 on how inexperienced translators suppress their creative solutions and opt for the application of systemic rules). It seems that language control (see Green 1993) engages all the cognitive resources with no capacity left for self-monitoring at the conceptual level.

With practice and corrective feedback, adequate exercises in text analysis translation trainees gradually acquire the ability to process a SL text not only as a whole but also as a part of the SL reality. To quote Stolze (2004: 44), “[i]nitially one will only have an individual understanding of the text and will need further research, before being able to present the message responsibly and comprehensibly. Later on, the translator will have acquired more experience and will be able to infer the relevant knowledge right from the beginning”. This statement suggests that translators with a modest amount of experience will consciously try to build a relevant KIN (cf. the stage of conscious competence by González Davies 2004) and the explicit process will frequently be time-consuming. With growing experience there is a transformation from explicitly created KINs to more implicit knowledge integration processes which are faster and run under meta-cognitive supervision which does not require huge attentional resources (cf. Donald 2007b and his hierarchical perception of consciousness). However, in unknown knowledge domains even the most experienced professionals will have to invest a substantial amount of time to create an adequate KIN for the task at hand. Some professional translators tend to complain that those who seek translation services do not take this part of the translation work into account as they pay per translated page or per hour of interpreting services<sup>12</sup>.

To sum up, the novice’s inability to awaken all the background knowledge results in the difference in the distribution of attentional resources during SL text comprehension which will have a direct effect on the subsequent process of meaning transfer. This is not to say that the mental processes of professionals and novices are totally dissimilar (Bell 1991) since they both attempt to transfer meaning from a SL text into a TL text and thus perform interlingual operations. The differences, at least those described through TAP research, occur “in the distribution and frequency in the types of strategies, i.e. the quantitative aspects of the translation strategies” (Lörscher 1992: 208) as well as in the control both novices and

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<sup>12</sup> (Anna Riitta Vourikoski, a member of the Finnish Association of Translators and Interpreters – private communication).

professionals have over the translation process due to the different KINs which are created in their translating minds (Whyatt 2010). Possibly the underlying cause of the difference between Knowledge Integration Networks (KINs) created by inexperienced (i.e., L2 learners/users), novices (translation trainees) and experienced translators (practicing professionals) reflect the fundamental differences in their conception of meaning.

### 5.3.2. Approaching meaning

As I discussed in chapter 3 and partially in chapter 2 student translators have a very simplified perception of meaning. This is most probably due to the fact that their conceptual proficiency is quite low and in the process of development. Textual and contextual meaning is frequently ignored for the sake of lexical meaning (Taylor 1990, Dodds 1999, Whyatt 2009a, 2009b). Hence, beginning translators ignore the contextual cues and process meaning on a micro-level, employing micro-strategies to solve the problems they encounter (Hönig 1991). They rarely understand that comprehension is knowledge of the language + extralinguistic knowledge (Gile 1993: 69), as well as that in understanding language one is constantly involved in a dynamic on-line interpretation and construction of meaning (Fauconnier 1998, Whyatt 2007b). Their focus on form and on horizontal processing fails to acknowledge that a text has its inner and outer context (Gorlee 1994) and understanding will sometimes require some knowledge of facts (political, historical, geographical, scientific, or other) rather than adherence to semantics. Their ignorance comes from the lack of translation experience accompanied by corrective feedback which would make them aware of the fact that in language everything conspires to convey meaning (Lakoff 1982, Wierzbicka 1991). As observed by some TS scholars, the conviction that to know a word is to know its form and meaning has frequently led many translation students astray (Kussmaul 1995, Rogers 1996, Whyatt 2008). It seems plausible that for novice translators words are treated as meaning units whereas for experienced translators words are in fact entries of different kinds of information and which aspects of the information are accessed is task and context specific (Seguinot 1997: 115).

Professional translators have a much more comprehensive multilayered perception of meaning. They approach the meaning in a functionally vertical way. They are aware of the *pre-existing knowledge* they have and the *discourse-induced knowledge* (Gile 1993: 71) they activate when they

are reading the SL text for translation, and for which they integrate all their relevant knowledge into an intricate KIN. They are also aware that in their efforts distributed between meaning comprehension, transfer and reformulation they may have to acquire some more knowledge, “additional information, both linguistic (generally terminological, and sometimes stylistic) and extra-linguistic” (Gile 1993: 71). In this respect translation is a knowledge-based activity for professionals (Wilss 1996) whereas for student translators (L2 learners/users and translation trainees who begin to translate) translation is a language-based activity in the narrow linguistic sense.

To sum up, professional translators approach meaning from a wider vantage point of their KIN at the level of their underlying conceptual base where the semantic knowledge is always subject to higher order thinking. Notions such as contextual appropriateness, effect on the reader, text type are primary to out-of-context semantic L1 – L2 correspondences. Novices, still very much uncertain about their language performance feel safer sticking to formal accuracy and semantic equivalence. They access their mental lexicon via lexical rather than conceptual links which frequently leads to mistranslation or translationese. As discussed in chapter two their verbal fluency frequently exceeds their conceptual proficiency. Consequently, when transferring meaning without a solid Common Underlying Conceptual Base (Kesckes and Papp 2000, Kesckes 2007) on which integrating knowledge into a KIN could rely is very difficult and the risk of producing errors is very high. This fundamental difference in perceiving form – meaning relationships points to novices’ inability to build a KIN which would include any other domains apart from their linguistic knowledge since even pragmatic knowledge seems to be missing. The difference in KINs which are created by novices and professionals in terms of approaching meaning is also visible in the clear difference in using external memory resources in the translation process.

### 5.3.3. Approaching external resources to aid translation

Student translators show a tendency to over rely on dictionaries which they treat as “the repository of a linguistic community’s knowledge of words” (Roberts 1997: 2), sometimes to the point that most of the entire time devoted to translating a text is primarily used to consult dictionaries (Varantola 1998: 179). Whyatt (2006a) showed that student translators used up to

50% of their translation time to consult dictionaries in a fairly simple translation task from English (their foreign language) into Polish (their native language). Atkins and Varantola (1998) and Mackintosh (1998) are among very few scholars who studied the use of dictionaries by inexperienced translators. They reported that most of dictionary look-ups took place during the first draft translation and not as recommended by Roberts (1992: 60) during the post-draft revision. Atkins and Varantola (1998) found a clear preference for bilingual over monolingual dictionaries. For L2 to L1 translation the disproportion reached 72% of all the look-ups in bilingual dictionaries as compared to only 28% in monolingual ones. In L1 to L2 translation the frequency of use for monolingual dictionaries increased to 37% of all the look-ups performed suggesting that student translators use monolingual dictionaries to understand the SL text (to decode meaning) rather than to encode meaning. Another observation reported by Atkins and Varantola (1998) and Mackintosh (1998) referred to the lack of self-confidence in making decisions which resulted in the need to find reassurance in dictionaries referring not only to the semantic information but also to the grammatical information about syntactic behaviour of words (e.g., collocation, countability, etc.) and discourse indicators (style, tone). Obviously, there is a problem of communicative confidence (Whyatt 2009a) in L2 use. However, Whyatt (2006a) reported that students overuse dictionaries as a source of expert knowledge about words or as an authority to dispel their doubts only initially. With growing experience they learn not to expect miracles from dictionaries (Varantola 1998: 181), they start to mistrust dictionaries and develop a more assertive attitude to their own choices or hunches. In other words, they start to understand that it is their skills as dictionary users which will “determine the ultimate success or failure of the dictionary search” (Varantola 1998: 184). Apart from the time consuming consequence of frequent dictionary consultations, it seems that they are in fact disruptive to the translation process as such which is starting and stopping all the time. It is possible that for inexperienced translators using dictionaries is in fact a distraction in the translation process, which as a novel task they try to consciously control. As discussed above controlled-processing uses cognitive capacity which is in limited supply. Distractions are disruptive to consciously controlled processes whereas they are not disruptive to processes which have been automatized. As stressed by Donald (2007b: 75) we usually trade off accuracy and speed in tasks which exceed our capacity for conscious control especially when we have to multi-task



like in translation. This is true of novice translators, despite their efforts, speed and accuracy, as well as communicative quality are frequently compromised. When the same task is performed in an automatic or semi-automatic mode we can tolerate disturbances<sup>13</sup>. It is then possible that professional translators do not find consulting dictionaries equally disruptive to the flow of the translation process.

Although there is a dearth of empirical research on how professional translators use reference material, some suggestions can be inferred from translation process studies (Hansen 2002, Dimitrova 2005). Generally, it can be expected that professional translators rely first and foremost on their internal bilingual mental lexicon which with their experience in translating must have been reorganized to allow for speedy and efficient cross-linguistic lexical access (Whyatt 2006b). Although there is no empirical evidence it seems justifiable to predict that their bilingual mental lexicons develop a new functional architecture which is interlingual rather than bilingual (Presas 2000, Paradis 2009). Chmiel (2004) discussing interpreters suggested that the effect of constantly tapping into the LTM store of vocabulary becomes inscribed in the form of tags explained as “individually developed microstrategies which also activate additional semantic and episodic memory traces” (Chmiel 2004: 111). These tags are then used as a system of warnings (e.g., watch out for potential false friend) or incentives (it’s fine, a well tested recipe). As it can be expected the mental lexicons of experienced translators are not only functionally reorganized but they contain significantly more lexical items with more detailed information about their grammatical behaviour (morpho-syntactic information gathered in lemmas) and contextual/situational (socio-pragmatic) rules. Experienced translators know that most of this information is not available in bilingual dictionaries.

Other features of the professionals’ approach to dictionaries are the consequences of their dynamic approach to meaning discussed above. In contrast to novice translators they are not focused on finding exact semantic equivalents, a TL noun for a SL noun, a TL verb for a SL verb since they do not mentally process information in a local but in a more global fashion. Vertical processing allows for a wide use of compensation strategies (Piotrowska 2002) and does not lead the translator into a ‘word trap’. Novice translators frequently become locked in one lexical item which

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<sup>13</sup> Donald gives an example of driving a car. Anderson used the same parallel.

they struggle to find consulting numerous dictionaries instead of reformulating the content and expressing the intended sense in different SL means (e.g., by paraphrasing a sentence). Experienced translators see the text as a whole, integrate all the relevant knowledge domains and via their Knowledge Integration Network (KIN) they prime access to their mental lexicon (see chapter 2 on mental lexicon and lexical access). Since they have accessed it on many occasions alongside the cross-linguistic route they reap the benefits of well paved connections which have left memory traces (Squire and Kandel 2009, Paradis 2009). For novices these connections sometimes do not exist and even if they access the needed lexical item they lack self-confidence whether or not it is the best one in this particular case so they have to find confirmation in dictionaries. Experienced translators have more confidence in making choices. If the memory inhibits retrieval due to fatigue or a temporary block (Rose 1991) they use dictionaries to trigger access. It can be tentatively assumed that professionals use dictionaries only if they have to, that is if a word is for them an empty frame (Kusmaul 1995) and understanding its meaning from context is impossible or risky. Even in such cases they usually do not turn to a dictionary during their first reading, but only in the subsequent stages of the translation process when more detailed comprehension is needed. They use bilingual dictionaries “to add nuance to meanings already established in their minds or to stimulate the search for solutions” (Kelly 2005: 16). In their look-ups their search is narrowed down by the pragmatic factors which they have already established. Professionals are more likely to research data bases for factual information which they need to solve a translation problem (Atkins and Varantola 1998). They also know from experience that they will not find non-dictionary type of information in dictionaries whereas student translators hope they will. Experienced translators also do not reach for dictionaries (which provide context free information about word use) if they need information referring to longer stretches of text than a lexical item to solve a context-dependent problem (Varantola 1998: 184). What is more they may sometimes consciously delay using a dictionary not to slow down the translation process. Some scholars reported that professional translators are likely to accept partial solutions which they mark as temporary and later they return to these stretches of the text during the subsequent revision of the draft translation (Dimitrova 2005, Roberts 1992). Although the question of tools at the translator’s disposal deserves much more attention in view of what is now available

thanks to information technologies (translation memory systems, CAT tools) let us sum up the differences between novices and professionals and assess them with respect to the proposal of KIN.

To sum up the above observations it can be assumed that professionals reap the benefits of their ability to integrate knowledge (KIN) also when it comes to using external memory tools such as dictionaries. Their search is frequently substantially narrowed down and therefore faster whereas novices look for words that they need without the contextual constraints which are in their mind unavailable since they have not integrated all the vital kinds of knowledge (an incomplete KIN). It has to be remembered however, that the professionals' experience in integrating knowledge, especially their bilingual knowledge base, will make them more confident in terms of lexical choice as well as will mean that their bilingual mental lexicons will be significantly larger than those of inexperienced translators. It will also have a different functional architecture (interlingual links). Consequently, not only the manner (using lexical and conceptual links) but also the speed of interlingual lexical access will be aided by their experience. Similarly, it is to be expected that with professional experience in translating the use of both language systems has been repeatedly practiced to result in the semi-automatic or automatic application of grammar structures and a possibly fairly rich assembly of interlingual ready-made word combinations used in familiar contexts. All this will lower the number of dictionary look-ups and save time as the translator becomes not only a more competent L2 user but also a more self-confident L1 and L2 user. The proposal of KIN stresses the importance of integrating all kinds of knowledge kin (related to like in a family) to the task at hand and predicts a priming effect on access to the formal linguistic means, e.g., words, structures, discourse patterns, etc. Finally, the time consuming effect of frequent dictionary use by inexperienced translators lends support to the possibility that for novices dictionary searches are disruptive to the flow of the translation process whereas professionals, who have automatized many aspects of the translation process, can tolerate these disruptions with no detrimental effect on the flow and fluency of the translation process. This difference could be explained as a stimulating effect of an adequate KIN produced by professionals and as an inhibiting effect of an incomplete KIN characteristic of inexperienced translators. Further differences in the distribution of attentional resources during the translation process are visible in how novices and professionals monitor their on-line performance.

#### 5.3.4. Approaching the translation process: self-monitoring and meta-cognitive supervision

Translation process studies, especially TAP research has shown that translators, both novices and professionals monitor their processing, but there are quantitative and qualitative differences in how they apply their meta-cognitive supervision over their performance.

Student translators tend to process information in a linear fashion. They tend to stay on the micro-level and rarely move further ahead or revise the stretches translated so far to pick up more contextual clues (Lörscher 1992, Gerloff 1986, Hansen 2002). They rarely reflect on the macro-level information, including the function and addressees of the TL text they create (Kusmaul and Tirkkonen-Condit 1995, Whyatt 2000, 2007a). They show a high degree of uncertainty when choosing one of the competing TL equivalents for a processed SL item (Whyatt 2000, Whyatt 2009a). As evidenced by Lörscher (1991, 1992) his protocol subjects who as foreign language students had a limited experience in translation tended “not to check those TL utterances, which they have translated and within which they did not realize there was any problem, according to their sense. As a consequence, the translations of the students more often than not reveal utterances which contain grammatical errors, even in their mother tongue, violations of TL text production norms, or which make no sense” (Lörscher 1992: 209). Whyatt (2010) pointed out that in novice translators most of the mental resources are spent on ensuring the progression of the translation process towards completing the task apparently with no processing capacity left to monitor the emerging outcome in its entirety. The monitoring reported in TAPs is mostly devoted to achieving semantic equivalence (Gerloff 1986, Whyatt 2007b). Most or almost all novice translators do not provide on-line revision of their emerging translations from their broadly integrated knowledge network (KIN). As they write down their translations, they rarely question their stylistic quality and focus on correcting local surface errors. The metalinguistic statements show a lot of concern for semantic accuracy at the expense of pragmatic appropriateness (Whyatt 2007a, 2009b).

With growing experience the amount of conscious control over the translation process to ensure good communicative quality increases. Krings (1986a) investigated 8 advanced translation students and reported that monitoring strategies constitute an important part of the translation process. “A characteristic feature of the subjects’ translational procedure was the al-

ternating occurrence of retrieval and monitoring strategies. After having retrieved a potential equivalent the subjects normally switched over to monitoring” (Krings 1986a: 272). Sometimes although in the minority these strategies resemble self-monitoring observed in free writing and oral production and refer to the correctness of a retrieved L2 item rather than its appropriateness as an equivalent. In the vast majority of cases, however, monitoring used what Krings calls ‘spot-the-difference strategy’ when assessing the appropriateness of L2 equivalents for particular SL items. The subjects compared the SL and the TL items looking for differences in terms of meaning, connotation, style and use. As soon as they found a difference they rejected the potential equivalent and undertook a new retrieval attempt. Krings noted that monitoring showed that “the learner’s intuitions concerning specific L2 items play an important role in the monitoring of the potential equivalents” (Krings 1986a: 272). However, Kussmaul (1991) pointed out that conscious monitoring can in fact inhibit or reject more intuitive and frequently contextually more appropriate solutions. Clearly however, with more experience in translation advanced translation students self-monitor their performance and show signs of metalinguistic awareness (Buchweitz and Alves 2006). Malakoff and Hakuta (1991) pointed to the importance of monitoring translation performance which they observed in natural translators as a sign of metalinguistic awareness, an important factor in the process of translation skill development (see chapter three).

Professional translators, who when translating (or writing down their translation) have performed an adequate KIN, seem to monitor their emerging texts from a global rather than local perspective. As we assumed earlier through their professional experience with interlingual transfer professional translators are better at controlling the way they use their L1 and L2 and they tend to keep the two language systems safely apart to avoid interference (Odlin 1989, Kesckes and Papp 2000, Jarvis and Pavlenko 2008). Their language control (Green 1993) and metalinguistic awareness (Bialystok 2001, Malakoff and Hakuta 1991) is a part of their meta-cognitive supervision which is not absorbing their consciousness as much as in novice translators. Consequently, professionals will differently distribute their mental resources to monitor the emerging product and the monitoring will not be as time and energy consuming as it is for inexperienced translators. Donald’s metaphor (Donald 2007b: 75) of the piano player who while focused on the entire interpretation will nevertheless notice (in his/her awareness) any disturbances at the lower level is very

useful here. Having easier lexical access due to their memory traces, more confidence about the meaning of words they use they are more likely to monitor their translations for style and pragmatic appropriateness. In their meta-cognitive supervision they will make a conscious effort to objectify their communicative results which is rare among inexperienced translators who frequently cannot distance themselves from their translations (see Lörcher 1992: 209).

Acknowledging the existing idiosyncrasy and variability in self-monitoring and providing on-line revision (Séguinot 1997), self-monitoring by professional translators shows an interplay between controlled cognitive problem solving and intuitive processing which is a commonly acknowledged feature of the translation process (see Höning 1991, Kussmaul 1995). Monitoring during the translation process shows that both levels of language processing can be subject to the supervising meta-cognitive awareness. Human beings can run many different automatic tasks keeping them at the same time under conscious supervision (Donald 2007b: 75). Monitoring the emerging product is probably as automatic for professional translators as monitoring our speech when we speak our native language (see Donald 2007b: 75).

Séguinot (1989a: 5) is among not many TS scholars who point out that self-monitoring is a part of the professional translation process.

The translation process is not a step-by-step linear progression. When we translate we are actually performing a number of tasks at the same time. We monitor our output and tend to correct mechanical errors as they occur. We do not search for words one at a time, wait until the search is successful, then search for a new word. The psycholinguistic research suggests that the unconscious operations involved in producing language can simultaneously pursue different options (Séguinot 1989a: 5).

This parallel processing, however, is only available to those with substantial experience in translating and who have developed automatic or semi-automatic routines that can be used in the multi-tasking without using up cognitive capacity in excessive amounts. It is available to those who have learned to produce an adequate KIN and use it for their meta-cognitive supervision in parallel processing at the lexical and conceptual level irrespective of the language. However as observed by Malakoff and Hakuta (1991) the basic condition is the routine and confident use of L1 and L2, including its grammar and lexis combined with metalinguistic awareness of linguistic

relativity as an expression of an intercultural/interlingual relationship between the SL and the TL. If the use of L1 and L2 is non-routine (i.e., as metalinguistic knowledge rather than communicative competence) but consciously controlled (for example during L2 lexical access or in the application of grammatical rules in beginner/intermediate L2 learners) cognitive resources are used for language control. Novice translators for example, try to exercise cognitive control even over their L1, which frequently leads to memory blocks like in the case of a female student translator trying to consciously recall which verb the Polish word *zysk* [profit] collocates with (Whyatt 2010) without success and to her own annoyance.

In this respect the fact that novice translators or student translators produced more self-monitoring verbal data than professional translators in TAPs can be interpreted in terms of the qualitative difference in the way they monitor their translation process. While for the inexperienced ones monitoring is conscious and cognitively controlled for professionals monitoring might be an automatized routine run under conscious supervision. Donald gives the example of monitoring our speech in an automatic mode when we do not have to think about the act of speaking itself, choosing words and checking for meaning. To quote, “When we are speaking our highly automatized native tongue, we can do many things at the same time as we speak, provided that we have automatic routines for doing them” (Donald 2007: 75). This kind of multitasking is only possible if we have automatized some of the tasks into routines. It can, therefore, be tentatively concluded that professional translators routinely self-monitor their performance and perform on-line editing because they apply meta-cognitive supervision prepared by an adequately integrated knowledge network (KIN). Novices tend to integrate knowledge as they self-monitor their performance and as a consequence their knowledge integration is only partial (i.e., frequently only metalinguistic knowledge and linguistic competence).

To conclude, it seems that inexperienced translators monitor their emerging translation by an application of rules (i.e., grammar) whereas professional translators use their intuitions based on their KIN derived from their experience (Séguinot 1989b: 80). The importance of self-monitoring and self-reflection is frequently stressed by translation trainers echoing Toury’s (1995) call for fostering in an aspiring translator an “internal kind of monitoring mechanism, which can operate on the (interim) product as well as on the act of translation as such” (Toury 1995: 250). Kiraly (1995) points to the need to encourage the development of

a functioning translation monitor through error analysis. It should be admitted however, that the empirical data on self-monitoring among professional translators is limited although it must have a significant impact on the quality of the final product. Similarly, there is not a lot of research into the revision stage of the translation process which aims to ensure the high quality of the TL text, although it seems to be the care for the formal quality of the translation that is tacitly assumed to divide natural and professional translation. The differences in how novices and professionals revise their translations are quite revealing with respect to the proposal of KIN.

### 5.3.5. Approaching revision

“We all have had the experience of being able to revise other people’s work more easily than our own” (Séguinot 1989b: 79). Hansen (2008) addressed this tendency in a paper entitled, “The speck in your brother’s eye – the beam in your own: Quality management in translation and revision”. Overall however, it has to be admitted that the revision activity which can be defined as an “execution of an overall text improvement plan that incorporates a series of local, functional corrections” (Roussey et al. 1990: 54), is an under-researched area in translation process studies. The scant data available allows one to assume that also in this aspect there is a substantial difference between novices and professionals. It is likely that the different perspective on revision is due to the differences in how novices and professionals integrate knowledge into temporary networks (KIN) built for the purpose of translating a SL text into its TL representative.

First and foremost, inexperienced translators, for example language learners, rarely revise their translations. Their processing effort seems to be focused on finishing the task. Jakobsen (2002) studied four professional translators and four translation students and noted that there is a difference in the distribution of time devoted to drafting the translation and post-drafting revision. Professionals seemed to have spent less time drafting their translation but more time revising it in the post-drafting stage although they introduced fewer changes than the less experienced translation students. This finding was consistent with Dimitrova’s (2005: 106) study which focused on post-drafting revision and reported that inexperienced translators (translation students) introduced a lot of changes in the post-drafting revision of their translations. Although there were



only 4 professional translators in the subjects studied by Dimitrova, the author concluded that the more experienced the translator the fewer changes he/she introduces in the post-drafting revision. Jakobsen (2002) observed that both professionals and inexperienced translators did more revising when they were translating into their L2, although as pointed out by Superczyński (2009: 24) it was not clear if more revising meant more time devoted to revision or more changes introduced when revising the TL text.

Roussey et al. (1990: 53) reported that there is a difference between professional translators and less experienced translators not only in terms of the amount of time devoted to revision but also in terms of the strategies used in revising the TL text. Inexperienced translators tend to focus on local problems or surface errors and they tend to read through the text in search for mistakes applying what Roussey et al. (1990) calls 'local-then-global strategy'. Professional translators in contrast to those less experienced in the task treat revision as an important part of the translation process (Mossop 2001). They are more likely to balance the 'local-then-global strategy' with 'global-then-local strategy' or as suggested by Roussey et al. (1990: 54) they use a 'simultaneous strategy' and revise the TL text paying attention to all the linguistic levels of the text including primarily the macro-structural level. Asadi and Seguinot (2005) studied nine professional translators and reported on the different attitudes towards revision. Some translators seemed to have created their translation in their mind first and made no or very few changes in the revision stage. Some seemed to "translate by revising" (see Mossop 2007) introducing a lot of changes in their on-line drafting of the translation and very few changes during the post-drafting revision as if they immediately revised their translation while typing it down and only very few changes were introduced during post-drafting. Lauffer (2002) who observed three translators using a combination of observational methods including Translog<sup>14</sup>, Camtasia<sup>15</sup> as well as TAPs noted that

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<sup>14</sup> Translog is a key logging programme which records all the keyboard activity during the translation process. It is used to study the translation process (see Jakobsen 1999).

<sup>15</sup> Camtasia called a 'screen spy' is a computer programme which allows one to record everything which is opened on the computer screen during the translation process. It is used to study how translators search for information in external memory sources (Lauffer 2002).

revision reoccurred many times throughout the translation process. Revision strategies included reading and rereading the text, comparing the source and target texts for accuracy and idiomatic language, verifying and changing lexical choices, adjusting grammatical structure changing word order, revising syntax and improving the overall flow of the text. Revision was done both immediately as the translators typed, and later when reviewing the sentence, paragraph and then the complete text (Lauffer 2002).

From the proposed KIN, it seems that the manner in which translators carry out the self-revision of the finished translation product shows their differing ability to create an adequate KIN for a particular task. Novices hardly ever revise their TL texts. Translators with very little experience spend more time revising but focus on local problems without the global purpose oriented meta-cognitive supervision which relies on their knowledge integration network. Novices find it difficult to distance themselves from the SL text while revising their translations, their focus on form brings about more care for local accuracy in terms of formal features of the TL words and phrases equivalent in meaning to their SL counterparts. Professional translators have a global rather than local attitude (i.e., due to their KIN). Some professional translators leave the TL text aside after the first draft and revise it some time later when they have gained some distance which will allow them to revise the translation with the fresh eye of an objective reviser. This tendency is significant. In a way, it might suggest that by leaving their translation aside, they feel the need to re-frame from the knowledge integration network they have been using so far to produce the draft translation. In the final stages of preparing the TL text to enter the TL reality, which will happen as soon as it is sent by the translator to the client who commissioned it for a specific purpose, the KIN has to be readjusted to make sure that the translation is a viable part of the TL reality.

With not much data available, the concept of re-framing in order to carry out a successful self-revision is only a hypothetical, though a plausible assumption confirmed by the problems novices have in terms of cutting themselves off from the SL text in order to revise the new TL text, as a text in its own right. If revision marks a definite point of departure from the SL text, it requires re-framing with focus on the target language and attentiveness to all levels of language use (language as knowledge and language as social practice, see chapter 1).

We must also remember that in professional practice, translators apart from self-revision frequently rely on cooperating with other professionals, revisers, proof-readers and editors who ideally collectively ensure the quality of the final translation. In the less ideal world of freelance translation including others is frequently a cost which is cut back on for economic reasons (see chapter 6). Including others might be the best way but it is still the translator who has to develop the skill of self-revision to eradicate as many errors or inadequacies as possible before approaching others as revisers. In this respect, a practicing translator is a one-man band and it becomes even more regular to maintain a self-critical approach to one's own translations.

Hansen (2008: 274) suggested that revision competence is closely related to translation competence but it is partly different. In effect good translators are not necessarily good revisers and therefore training is needed to develop the skill of revision. In her own words, "the necessary presuppositions of revision, which are attentiveness to pragmatic, linguistic, stylistic phenomena and errors, the ability to abstract or distance oneself from one's own and others' previous formulations, fairness, and explaining and arguing – these can be trained at universities, in separate Masters' courses on revision" (Hansen 2008: 275). Whether revision is treated as a separate skill or not, it is an important part of the translation process<sup>16</sup> in professional translation (Breedveld 2002). Accordingly the ability to self-revise one's translation is a part of the human skill to translate to reach professional standards.

To sum up, considering the above arguments the ability to produce a KIN for a specific translation task is developmental in nature and reflected at every stage of the translation process from approaching the SL text to revising the first draft translation. From the comparison of differences in how novice translators and professionals approach various stages of the translation process it is possible to conclude that what divides them is their differing ability to activate, integrate and apply knowledge of all kinds. Novices seem to be at the beginning of this evolutionary journey and make a conscious effort to integrate only the knowledge of the two language systems which in itself is difficult (see chapter 2) especially when viewed from the communicative competence perspective. Accord-

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<sup>16</sup> In traditional divisions of the translation process revision is assumed to be a part of TL text production.

ing to the cognitive learning principles the ability to activate and integrate knowledge proceeds from the conscious or deliberate effort to semi-automatic and automatic application. However, as stressed by Donald (2007b) automaticity is a product of practice and conscious rehearsal and as such is always open to further modification. In translation skill development from the stage of natural translation ability towards professional expertise, the role of awareness and the rehearsal of skills is essential. The role of self-involvement in the refinement of skills past the natural ability to translate shared by all bilinguals points to the importance of consciousness in the learning process. As observed by Donald (2007b: 78), “there is very little evidence of complex skill learning outside of consciousness”. Since it is widely assumed that translators learn from experience but it is infrequently pointed out what they actually learn, the proposal of KIN makes a prediction that through experience combined with corrective feedback and/or self-reflection translators learn to activate, integrate and apply all the knowledge relevant for (kin to) a particular translation task. Most importantly, however, the parameters set by an adequate KIN provide the grounds for meta-cognitive supervision and on-line quality control during the drafting of the first version of the translation and at the stage of the post-draft revision. Finally, re-framing the KIN is needed to ensure that the TL text is not only a pragmatic match of the SL text but also a viable and communicatively comprehensible part of the TL reality.

The discussion of the different approaches that inexperienced and experienced translators show at all the discussed stages of the translation process points to the local (inexperienced and novices) versus global (professionals and experts) perspective. It therefore seems that the ability to build KINs allows translators to see the SL text from their background vantage point and supervise how and to what effect the contents of the SL text is transported into a TL text which then becomes a part of the TL reality when it is used by members of the TL community, printed, published or made otherwise available to TL users. The process of creating an adequate KIN is dynamic in nature and starts with the first encounter with the SL text which needs translating. As pointed out by Séguinot (1989a: 6) even in comprehending the SL text “we are constantly making predictions about what is ahead. We do this on the bases of educated guesses. The education comes in several forms: experiences stored in the form of scripts, scenarios, frames, schema, i.e., patterns, which include knowledge about types of texts, language patterning and content information about the way the world

operates". The ability to integrate knowledge is possibly what differentiates a novice and a professional. More research into how this ability develops parallel to translation experience can allow for a more fine-grained distinction between a novice, a trainee a professional who begins his/her career, an experienced professional (Hoffman's 1997), and a translation expert, as well as a specialist.<sup>17</sup>

It seems that the ability to integrate knowledge is a slow global process which requires not only experience but conscious self-learning from the experience of translating. As such the proposal of the evolving ability to integrate knowledge in the process of translation skill development has another consequence. It assumes that translators who consciously and intentionally develop their human skill to translate are not only applied linguists and intercultural mediators but first of all expert learners who learn to reorganize and integrate knowledge.

#### 5.4. The translator as an expert learner

Many assumptions have been made about the translator's knowledge and expertise but less frequently translators have been seen as learners themselves as if this perspective was a threat to their professional competence. Similar scant attention has been paid to the fact that the experience of translation has an accelerating effect on the bilingual knowledge base of the developing translator. Translators by having to handle both working languages in the translation process gradually acquire a wide range of vocabulary exceeding the average size of the mental lexicon needed for general communication. The pragmatic knowledge, sensitivity to discourse patterns governing the choice of register and style and the awareness of linguistic relativity that translators gradually accumulate parallel to the growing range of their translation experience has rarely been acknowledged in the discussion of the development of translation as a human skill. By hypothesizing the concept of KIN and suggesting that the development of expertise in translation relies on the translator's growing ability to integrate knowledge I see the translator who chooses to become a professional as an expert learner. As indicated in chapter 4 this perspective allows to account for the

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<sup>17</sup> See Jääskeläinen (2010: 216) for more detailed distinctions in expertise research, i.e. professionals, routine and adaptive experts and specialists following Hatano and Inagaki (1992).

development of translation expertise supported by institutionalized training and/or reliant on self-learning and self-coaching. The development of translation expertise is most likely a slow process. Below I present two perspectives on the translator as an expert learner: the translator as a Systems Intelligent person and the translator as a self-confident expert.

#### 5.4.1. The translator as a Systems Intelligent person

Peter Newmark (1969: 85) said, “any old fool can learn a foreign language but it takes an intelligent person to become a translator”. When I shared this quote with my translation students they found it very encouraging, not to say flattering. The statement superficial as it might seem provides some food for thought. Translators through their work participate in many inter-related systems like language (L1 and L2), culture (L1 and L2) and respective societies. Throughout their professional life they learn to function within these systems and interact with them and they might even have the power to influence them and introduce change (Saarinen & Hämäläinen 2007). In a way they become Systems Intelligent persons.

Although much of Systems Intelligence philosophy is devoted to sociology and grounds itself on the ancient premises according to which the ultimate goal of human behaviour is the betterment of life, it also offers a feasible framework to view the gradual development of translation as a human skill compatible with the framework offered by KIN proposed in this chapter. In many ways the translator as an expert learner learns to act within many interconnected multifaceted systems including: the two working languages (in themselves interconnected knowledge systems as I discussed in chapter two), the two respective cognitive cultural networks of L1 and L2 (Donald 2006), the author of the SL text, the client who commissioned the translation driven by a purpose, the viable text typological norms, and any other systems including the translator as a cognitive system with imposed limitations discussed in the four assumptions on which KIN rests. In the process of interacting with the many systems which are intrinsic to translation activity the translator as an expert learner has to develop his/her Systems Intelligence. To quote,

By Systems Intelligence (SI) we mean intelligent behaviour in the context of complex systems involving interaction and feedback. A subject acting with systems intelligence engages successfully and productively with the holistic feedback mechanisms of her environ-

ment. She perceives herself as part of a whole, the influence of the whole upon herself as well as her own influence upon the whole. By observing her own interdependence in the feedback intensive environment, she is able to act intelligently (Saarinen and Hämäläinen 2007: 51).

The assumptions of Systems Intelligence include several ideas which are present in the translator's behaviour:

- whole is more important than parts
- 'part' and 'whole' are relative abstractions that are always subject to redefinition by changing the perspective
- Systems approach begins when you start to perceive the world through the eyes of another person
- Systems approach looks beyond isolated linear cause-and-effect chains for interconnections and interrelations

The relevance of Systems Intelligence to the development of translation as a human skill hinges on the primacy of the whole, multifaceted interconnections and interdependencies that have to be accounted for by the translator. Essentially it means that the translator as an expert learner develops what can be called 'intelligence-in-action', a kind of understanding which "will be judged by its practical outcome and manifestation in the conduct" (Saarinen & Hämäläinen 2007: 56), the actual translating performance and its final product.

As such this expertise clearly relates to what Aristotle called practical rather than theoretical reason and is therefore more focused on 'knowledge how' rather than on 'knowledge that'. Consequently, it exceeds the strictly cognitive perspective according to which we consciously apply learned patterns and allows for integrating all possible capacities which include instinctual, intuitive, tacit, subconscious, unconscious and inarticulate aspects that cannot be accounted for within a strictly cognitive perspective. This all inclusive nature of system intelligent behaviour places the Systems Intelligence framework in a much wider perspective than the strictly cognitive one offered by Gardner's Multiple Intelligence and Systems Thinking. As explained by Saarinen and Hämäläinen (2007). Systems Intelligence although inspired by Systems Thinking literature (Churchman 1968, Checkland 1999, Flood 1999, Senge 1999) aims to account for the practical, active thinking

used by human agents “in real life situations involving complex systems of interaction with feedback mechanisms” (Saarinen and Hämäläinen 2007: 51).

In translation studies literature there are authors who have indicated the interactive aspect of learning to translate to reach a professional level. Toury (1995) suggested the concept of socialization according to which a beginning translator has to learn to become a member of the translating community, by accepting its norms and working out his/her own understanding of the profession. Kiraly (1995) focused more on the cognitive aspects developing what he called the translator’s self-concept, viewed as the understanding of one’s active role in the translation process. In his later works Kiraly (1997, 2004, 2005) stressed the socio-constructivist ideas of the learning self in response to dynamic interaction with a feedback rich environment. Other scholars stressed cognitive and intuitive processing (Hönig 1991) in translation and the concept of creativity (Kusssmaul 1991, Mackenzie 1998) in the translation process when reason goes together with ‘gut feeling’ (Robinson 1997). In this respect Systems Intelligence is broad enough to encompass all the aspects of translation as a developing human skill which combines personal mastery with socially owned mental models, shared vision, team learning and systems thinking<sup>18</sup> (Senge 1990).

When approaching the translator as an expert learner in the process of developing the skill to translate it seems that there must be an evolution from the learner’s personal mastery into systems thinking. The translator develops his/her capacity (personal ability/mastery) to use the two (or more) languages to bridge language barriers for other members of language communities who cannot communicate otherwise. To do so translators have to be aware of their mental models formed by their unique culture. The theory of Systems Intelligence forms a fundamental link between personal mastery and systems thinking. Personal Mastery is defined by Systems Intelligence as the individual’s ability to fully use one’s unique potential “to manoeuvre successfully in the various systems structures that constitute the environment...” (Saarinen and Hämäläinen 2007: 58). Mental models, one’s models of thinking determine what actions are considered necessary and possible. In a way “thinking transforms into action and repeated action into habits” (Saarinen and

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<sup>18</sup> Peter Senge (1990) in *The Fifth Discipline* defined the above as key themes in learning organizations (for us translators).



Hämäläinen 2007: 51). This simple chain of transformation describes the translator's progression in the evolution of his/her human skill to translate where declarative knowledge about translation becomes proceduralised and through repeated experience combined with self-reflection forms a repertoire of routines, well-tested procedures and reliable work habits.

However, as observed by Senge (1990) people are mostly unaware of their mental models, their modes of thinking which drive and direct their actions. Similarly, translators are unaware of their procedures in their entirety. This however, does not mean that some mental models are not subject to self-reflection. A translator is a self-correcting learning system where the impact of experiences is always idiosyncratic and sometimes incidental. In Systems Intelligence thinking about thinking defined as a fundamental meta-level capacity is crucial and includes:

- acknowledging that one's actions and behaviours reflect the way we think (our mental models, assumptions, beliefs, interpretations, etc.)
- acknowledging that one's thinking can be highly idiosyncratic, one-sided and thus distorted with reference to the holistic systemic environment
- seeing the need to mirror one's mental models and engage in meta-level thinking about my own thinking in order to act more intelligently, to change "my behaviour and actions to be more in line with my true aspirations, interests and the parameters at hand, as they appear in the environment in which I operate" (Saarinen and Hämäläinen 2007: 60)
- seeing the need for meta-level reflection on my own framing of the environment as the holistic interactive system to overcome the idiosyncratic limitations to improve the effect of one's actions.

It is possible that the evolution and development of translation as a human skill requires limitless re-framing of how the translator perceives the two language systems and the translation environment as a complex arena of interactive systems. As pointed out by (Saarinen and Hämäläinen 2007: 60), "[i]t is a well known fact of cognitive science and creativity research that re-framing is a key to new opportunities, higher productivity and creativity at large". The motto of this chapter by Séguinot (1989b: 80), "The key feature of expertise in the performance of skills is the ability to restructure knowledge" lends support to this perception.

Similarly, the role of self-reflection in translation expertise development signalled in chapter 4 is very much in line with Systems Intelligence. To quote,

Thinking about thinking is about identifying one's favoured framing patterns, challenging them and adjusting them accordingly. It is clear that the possibilities to re-frame the holistic, feedback intensive structures around self, as well as their relations to self, are literally limitless. At the same time one is likely to have gotten stuck and stationed to some particular framing (Saarinen and Hämäläinen 2007: 60).

A mature translator as an expert learner (Schön 1983, Ertmer and Newby 1996) and a Systems Intelligent person will acknowledge the limitations of his/her own thinking and mental models, re-framing and re-adjusting his/her Knowledge Integration Network (KIN) according to the changing interactive environment and feedback structures. This continuous re-thinking of one's own thinking is fundamental to the development of translation as a human skill. The translator as an expert learner through the repeated activity of translating and by reflecting upon the choices made builds up a repertoire of experiences of building KINs, hypothesizing solutions, assessing them, rejecting, accepting, etc. As an expert learner the translator learns to self-govern his/her learning process, re-frame if necessary unproductive ways of going about the translation task. In effect the translator develops his/her Systems Intelligence and becomes more and more self-confident, more and more empowered (Tymoczko 2007) to solve problems and make decisions either cognitive or intuitive while at the same time being aware of moving within certain organized and rule-governed systems, e.g., L1 and L2, the respective socio-cultural realities, the specific knowledge domains and the people who participate in communicative interaction made possible by the translator. As put by Tabakowska (2003), in the game of translation, the translator deals the cards but he/she is not the only player. Irrespective of the fact whether one subscribes to the view of general intelligence (the 'g' theory) or to the framework of multiple intelligences (see Waterhouse (2006: 211), and Gardner and Connel (2000: 292) for different frameworks) complex skills like translation require a synergy of knowledge and skills applied by a Systems Intelligent translator. This integration of different factors accompanied by self-reflectivity has also a wider ethical dimension when one considers the fact that translators are in many ways social agents (Chau

1991), hence their Systems Intelligence becomes paramount. As observed by Tymoczko (2007: 220), “Only self-reflectivity can alert translators to the various constraints – internal and external – that they face in pursuing their ethical, political, and ideological goals in translation, making it possible to come to grips effectively and strategically with the complexities of their historical and cultural contexts”.

To summarize the translator is a constant expert learner as frequently admitted by authors of guides and experienced translators. Through integrating knowledge for the purpose of translation he/she constantly re-structures the knowledge structures to be able to perform in a more effective way both in terms of the quality of translation and the time it takes to produce a translation. In this way one can say that like in any other complex skill, the translator becomes more confident and has more trust in his/her own abilities and is more aware of his/her limitations. The memory routes have been traversed so many times that it takes much less time to retrieve information, or a desired TL word. Since the notion of self-confidence is an essential product of expert learning and an essential aspect of expertise let us look at how translators develop self-confidence.

#### 5.4.2. The translator as a self-confident expert

The concept of self-confidence is essential when discussing skill development. Hönig (1991: 88) pointed out that “self-confidence is fundamental to effective and successful translating” but not many scholars have tried to dismantle what this really means and where does self-confidence come from. Whyatt (2009a: 379) discussed the concept of communicative confidence with reference to communicative competence and pointed out that both notions are not necessarily parallel when it comes to L2 learners’ performance although people tend to assume that self-confidence subsumes competence. In her paper entitled “Building L2 communicative confidence through interlingual tasks”, the author demonstrated that translation tasks which abound in open-ended problems challenge the L2 learners’ communicative confidence by creating doubt which has to be overcome in order to make a decision on how to solve a particular problem. Confidence like courage, is the quality which is summoned when the need arises. Confidence is needed when in doubt and in need of making a decision and courage is needed in the face of fear and in need of deciding how to act. To quote,

Since many translation problems are open-ended, in the sense that there are no readily available rules/formulas that can lead to appropriate solutions, the task requires creative thinking with fluency and flexibility in the choice of strategies as the most wanted companions. This puts the L2 user [here translator] in situations when the outcome is uncertain and, as indicated above, when doubt arises and the outcome is uncertain confidence is needed to make decisions (Whyatt 2009a: 379-380).

Many TS scholars observed that when making decisions novice and experienced translators differ primarily in the length of time needed to handle a particular problem. Experts are characterized by accurate and reliable judgments but also by ‘economy of effort’ even in the face of ‘rare or tough cases’ (Hoffman 1997: 199-200). Some scholars point to expertise-based intuition defined as “intuition rooted in extensive experience within a specific domain” (Salas et al. 2010: 941) and stress its role in efficient decision making grounded on self-confidence. Donald (2008: 191) extends the perspective from a personal to the social dimension of decision-making saying that although “decision making is a very private thing, individualized and personal, it also has a cultural dimension”. As stressed by Donald (2008), since the way we acquire knowledge and skills is always supported by the culture in which we grow up and become educated in, the decisions that we make “engage learned algorithms of thought imported from culture”, whether we use language, play chess or conduct business negotiations. Some decisions are made quickly and some take a long time especially if they are going to affect other people like in the case of translation problems. TAP research has demonstrated that novice translators with some limited experience in translation take a long time to make decisions which is frequently interpreted as a sign of low or no self-confidence. They constantly look up words in dictionaries to find confirmation for their decisions because translation questions their knowledge of vocabulary (Whyatt 2009b) and even in their native language they lose their language instinct and their self-confidence in their language skills. The combination of personal decision-making with its social dimension seems ecologically valid for professional translators and possibly requires personal yet socially grounded self-confidence.

Why does translation challenge our linguistic self-confidence when we become involved in the activity? The reasons are various. First of all, we know that we are not speaking for ourselves, we only give our voice to somebody else and we feel intrinsically obliged to do the best we can for

the original communicator to communicate his/her message clearly and without changing its sense and purpose. As many professional translators have frequently experienced interpreting the sense and communicative intentions is not always easier if the SL text is in one's native language. For example, let us consider a brief excerpt from an article I once was asked to translate:

*Prace badawcze wykonane w obrębie infiltracyjnego ujęcia wody „Dębina” w Poznaniu miały na celu rozpoznanie zmian w aluwkach rzeki Warty (w strefie aeracji – do głęb. 1,5 m) zaistniałych pod wpływem wymuszonej infiltracji wód powierzchniowych. Zidentyfikowano efekty kolmatacji chemicznej, biochemicznej i mechanicznej oraz wskazano na uwarunkowania sprzyjające jej rozwojowi. Podatność osadów na przeobrażenia wywołujące kolmatację wynika głównie z: anizotropii przepuszczalności, związanej z dużym zróżnicowaniem fałdalnym osadów (zarówno pionowym jak i lateralnym), licznych przewarstwień mułków, spowalniających lub ograniczających infiltrację, a jednocześnie ulegających rozmywaniu i przemieszczaniu w zawieszynie, obecności w aluwkach szczątków organicznych (Skolasińska 2003: 73<sup>19</sup>).*

I still remember what I felt having read the article. Although it was written in my native language, it was an alien register and my native speaker self-confidence was challenged and of no help. I had no background knowledge to interpret the meaning of words and creating an adequate KIN required a lot of factual research and as a result was extremely time-consuming but, to my gradual self-discovery, not impossible. Then supported by parallel texts in English (since there was no adequate dictionary of geological terms available at the time) and with expert advice from a geologist with some although limited knowledge of English but extremely useful as a valuable source of terminology, I did translate the article which was later published in a research journal. I frequently self-reflected on how much I learned translating that article not only about geology, as this knowledge was only transient and temporarily needed for my KIN, but about translation and self-confidence. Through integrating all the knowledge which was needed to translate the article and having built an adequate KIN I gained grounds for my self-confidence.

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<sup>19</sup> Skolasińska, Katarzyna. 2003. „Kolmatacja osadów w strefie aeracji pod wpływem infiltracji wód powierzchniowych (na przykładzie ujęcia wody ‘Dębina’ w Poznaniu)”. *Przegląd Geologiczny* 51/1: 73-78.

The above example illustrates that the translator's self-confidence is a fluid quality summoned by the need to solve problems and make decisions. It is not something the translator has once and for all because in totally novel situations and unknown knowledge domains it has to be supported by the knowledge acquisition needed to build a network of knowledge (KIN) so that translating can be done with confidence. If the translation is done in a familiar context, in an area that we have previously created KINs for, then our decisions will be made with confidence, faster and more adequately. If we translate in an area which we do not have much knowledge about our cognitive expenditure to create a KIN will be larger to make us feel self-confident and knowledgeable enough to give our voice to other experts in the fields in which our expertise is limited.

Lack of factual background knowledge is not the only challenge to the translator's self-confidence. The fact that for a vast majority of translators one of the working languages is not the language they feel completely at home with (L2, language B) is a major threat to feeling self-confident when using it in translation. As discussed in chapter 2, the L1 is stored in our procedural (implicit) memory (meaning we use it without the need to explicitly apply rules) and the L2 if learned consciously as knowledge is stored in our declarative (explicit) memory. Bearing in mind that translation is the conscious and deliberate use of both language systems with the imperative to activate only the TL in the actual translation performance the procedural/declarative divide may prove tricky for the translator's self-confidence. Whyatt (2007b: 142) reported that L2 advanced learners of EFL at university level felt annoyed by their slow lexical access to their L1 words and their lack of certainty as to how to combine words into natural L1 collocations.

When one consciously tries to retrieve an L1 morphosyntactic pattern from the bilingual mental lexicon the information is not explicitly available but accessible as an implicit procedure. In other words, if we ask ourselves, *z czym się kolokuje zysk?* [what does the word profit collocate with?] (Whyatt 2010) we are approaching our native language knowledge from a metalinguistic declarative perspective. This means that we are running the risk of slowing down lexical access or transferring an L2 pattern (which is consciously available because it was learned) and we might say *zrobić zysk* (to make a profit) displaying an influence of our L2 on our L1. It is possible that the lack of self-confidence disturbs the interplay between cognitive and intuitive processing.

As pointed out by Donald (2008), “unconscious or “intuitive” decisions are often the best, and many successful decisions occur in an automated manner, in highly over-predicted situations” (Donald 2008: 191). In the context of translation this intuitive mode is frequently blocked off either by lack of experience in traversing the procedural/declarative divide in novice translators or by problems with language control (see chapter 2) due to fatigue in experienced translators, for example. In both cases low self-confidence is visible in the translator’s performance.

When translating into one’s L2 the challenge to one’s self-confidence usually comes from the incomplete communicative competence in the foreign language. The pragmatic knowledge or discourse grammar (Paradis 2009) is likely to be compromised due to gaps in L2 socialization. As a result, in the use of L2 for translation not only the inexperienced face numerous problems referring to whether or not a particular word can or cannot be used in a given context (Whyatt 2009b). The knowledge needed to make such a decision is usually too subtle to teach (Nida 2002) and has to be acquired by practice either in communicative situations or in translation. Providing optimum conditions for learning all the little nuances in meaning as being dependant on the context and situation remains a challenge for L2 teaching/learning methodologies and is of viable interest to translation training pedagogy. More confident L2 users are more likely to develop into self-confident translation professionals.

It seems that the notion of self-confidence is a key factor in the development of translation expertise and a product of repeated translation experience. It is based on sound judgment of one’s true abilities and on the awareness of and adherence to job ethics. Yet, it is tempting to ask what drives the development of self-confidence in those people who aspire to become professional translators. Is it the promise of a well-paid job, or is it simply passion for the activity in itself? The first reason seems unlikely in the present situation in which the profession is socially undervalued and underpaid. The role of affective factors in translation skill development to reach the level of expertise seems a better candidate as a driving force behind the translator who as an expert learner engages in the process of building his/her self-confidence.

### 5.5. Undervalued affective factors in TC acquisition

The fact that those who seek to develop translation skill find translation a challenging, demanding and rewarding activity plays an important part in the transition from translation as a bilingual ability to translation as a skill which can be trained, practiced and eventually mastered sufficiently enough to allow one to call oneself a self-confident competent professional.

As observed by Shreve (1997: 125) translation skill will exceed the bounds of the natural untrained ability only if a bilingual person will intentionally choose to work towards it and for whom translation becomes a “deliberately sought out” communicative experience. Consequently, TC acquisition can be seen as a learning process of a highly motivated expert learner. This possibility is very likely for the simple reason that translator training programmes place very high demands on candidates (i.e., L2 mastery discussed in chapter 2) and are highly selective and usually available to a small number of students. At the English Department where I work the conference interpreting programme takes on 12 students out of about nearly 200 EFL students. The MA course in written translation which started in 2010 accepted 15 students out of 70 candidates. Having gone through a tough recruitment process, it can be expected that the trainees are indeed highly motivated.

Another motivation enhancing factor comes from the nature of translation as a purposeful communicative activity. Translation is a highly humanistic act whose aim is to help others to communicate for various reasons (Whyatt 2009b: 198). It is summoned to fulfil a strong human need to share information, ideas and generally to interact with others whether on a private or public level. The awareness of this social role is highly motivating for the translator irrespective of the point on the developmental continuum, or “evolutionary space” (Shreve 1997) of translation as a human skill. Natural translators, L2 learners or L2 users can translate even if the formal aspects of their performance fall short of professional standards. Jensen (1998) is emphatic that motivation especially internal is of utmost importance for the long-term educational effect of the learning process. Memory research has also confirmed the role motivation plays for the retention of learnt material, as well as for the future recall of needed knowledge both declarative and procedural (Squire and Kandel 2009). Translators as self-motivated expert learners through practice be-



come aware of how much diverse knowledge is frequently needed to allow for fluent translation. Much of this knowledge is language-related and sometimes reliant on subtle socio-pragmatic rules. Negotiating doubts when solving translation problems and restoring one's self-confidence, recovering from ups and downs in the translation process involves emotions whether one is aware of them or not. In consequence the memory traces are comparable to those which accompany a player in a game of skill (Whyatt 2009a: 375) who takes the challenge, acts in a goal-oriented way and receives a reward (even if the reward is the very experience of playing the game).

It is also possible that the intense information processing required in translation provides a very stimulating environment for interplay between emotions and cognition. In this respect further internal motivation comes from the complex intellectual demands of translation as a cognitive intellectual task. Whyatt (2009b) reported that 91% of subjects (advanced L2 learners) said that they treated translation tasks as a kind of challenge, a brain teaser which offers an intellectual virtual reality game in which the L2 learner acts as a translator (see Gorlee 1994 on applying game theory to translation). By assuming different social roles, e.g., when translating a recipe, or a tourist brochure, etc. the translator enters the realm of cross-cultural empathy and constantly learns new words and new concepts.

It is also plausible that translation tasks by their game-like nature provide students with strong motivation "the desire to communicate" what Paradis (1992) calls the microgenesis of an utterance.<sup>20</sup>

Perceiving translation tasks as a kind of virtual reality game allows one to resort to a variety of strategies which combine analytical thinking and intuitive problem solving. In translating it seems that the translator might find "an abstract, game-playing pleasure, marrying both objective, analytical reasoning and more intuitive or creative thought processes" (Jones 2002: 130, quoted after Chmiel 2004: 249). This aspect of doing something with pleasure has rarely been discussed in translation skill development as if it did not fit the educational context, or as if it might belittle the serious aims that are ahead of translation trainers. To quote,

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<sup>20</sup> This strong motivation is typical of L1 acquisition but it is mostly missing in the learning of an L2 in a school environment resulting in a lack of dopamine release (Schumann, 1998, see also Damasio, 1994, 1999 on the neglected area of the role of emotions in learning).

Strangely absent in theoretical speculation on translation teaching have been theories of play and game in language. This is all the more surprising in that any attempt to theorize intuition in thought and creativity in language must surely take into account the enormous cognitive contribution of play in human development (Bruner et al. 1976) (Cronin 2005: 259).

As Volkovitch (1998: 242) explains, “the ludic dimension is in no way incompatible with rigour, even if the latter is hidden by way of modesty or design” (quoted after Cronin 2005: 258). Yet, as observed by Gorlee (1994) the translator involved in the activity fits well in the description of a rational player who challenged by the task to translate will mobilize the entire cognitive potential. This is noticeable in translation classroom discourse with multiple voices being heard in which a wealth of various pieces of knowledge surface and might contribute to finding a solution to a translation problem. It does seem that the learners in a collaborative effort (see González Davies 2004) are involved in a game of sometimes hit and miss with frequently amusing effects which create a good-humoured atmosphere favourable for creative thinking (see Kussmaul 1991, 1995). When two languages and two worlds meet in translation, there is a frequent unintended collision of concepts and forms. Having taught translation for 20 years I have frequently observed what I called ‘a laughing test’ which describes the students’ immediate reaction of bursting out with laughter when a similar amusing effect is unintentionally achieved by their peer, a novice translator. Only later the analysis and the explanation of the error which resulted in evoking unwanted associations in translation follows. Nobody takes offence and the only conclusion which is drawn is in the need to be vigilant about the fact that languages play their own games if not kept under control. Accordingly, Kussmaul (1991, 1995) saw the potential of the ludic elements of translation as a creative process of problem solving, pointing out that the subjects who participated in his TAP studies during the incubation stage diverged from conscious problem solving into laughter and fooling around, playing with language and frequently this relaxed atmosphere resulted in illumination and finding a solution which would not be found by analytical reasoning. As Cronin (2005: 258) points out, “[t]here is an awareness therefore, of ludic potential in translation pedagogy, but the actual theorization of play itself is almost wholly absent from speculation (see Cronin 1995)”. Still, the fact that translation as a task is enjoyable and intellectually rewarding is enhancing the motivation of the learner involved in the process of TC acquisition.

For practicing and professional translators, the effect of the translation experience is highly motivating, on the one hand by the financial gain (being paid for the work) but this external motivation is not of primary importance. As many practicing translators would agree the actual work involves long hours in front of the computer screen, intensive effort to meet the deadlines and frequently no feedback from the client apart from the frequently delayed paycheck. The internal motivation is then more fuelling on an everyday basis possibly drawn from the unlimited intellectual demands of translation tasks which continuously expose lack of knowledge or lack of communicative confidence whether the knowledge one has is applicable to a specific translation task. Overcoming these limitations and playing with the uniquely flexible tool that language is (Delabastita 1993) seems to be a potential source of self-fulfilment. Newmark (1999) in his interview with Monica Pedrola admitted that he likes to translate because translating is “a crossword puzzle, it’s something very attractive, I love to translate for the same reasons: because you have to try to fit things in; it’s not only work it’s a game as well as work and it helps you to understand people” (Pedrola 1999: 20).

All these affective factors show that there is a role emotions play in the process of TC acquisition and as such require more attention (see Hayes 1996). Learning to integrate knowledge and build an adequate KIN for each translation task creates the need for cognitive adaptation and creativity. The above mentioned translation-inherent motivation enhancers are well known to translator trainers but they also provide explanation that translation as a human skill is well suited to self-development, self-improvement and self-mastery when the translator is perceived as an expert learner.

## 5.6. Conclusions

Drawing on what is known about the nature of translation with respect to its function and process I have hypothesized that the development of translation as a human skill to reach the level of professional expert knowledge is dependent on the ability to integrate all the knowledge required for a task at hand. Translators to translate a text have to create in their mind what I termed a Knowledge Integration Network (KIN). The KIN is in this respect similar to the model of translation competence put forward by Cao (1996: 328 after Piotrowska 2007: 127) in which atten-

tion is drawn to the fact that in translating different sets of knowledge are activated. In my proposal it is not only activation that is important but the integration of the needed knowledge domains. It is through the integration of the knowledge networks that linguistic tools are prepared for the actual process of writing down the TL text. KIN is then an expression of the translator's cognitive adaptation to a particular translation task (see Buchweitz and Alves 2006).

It is expected that KIN is performed in preparation for the translation of every text. However, in its nature it is a dynamic constellation which is flexible and subject to on-line modification as the translator progresses with his/her task. It remains active throughout the whole translation process, including revision and editing. It responds to the meta-cognitive supervision and the actual physical articulation of the process into a product, i.e., the typing of the translation. In simple terms KIN acts as a stock-taker. It either assures the translator that 'yes, you have all the necessary knowledge that is needed to translate this text' or it informs explicitly or implicitly, 'you need to complete your KIN to translate this text because, for example:

- 1) The area is unfamiliar, e.g., your knowledge of geology is next to none you will have problems understanding the text although it is in your native language.
- 2) Because of the missing conceptual knowledge you are also missing adequate vocabulary in both SL and TL lexicons to talk about it.
- 3) You have all the conceptual knowledge but since you have not dealt with this knowledge domain in your TL (i.e., L2), you will not have the necessary terminology. For example, names of plants mentioned in the description of the park which is for sale together with the palace in the business offer you are translating'.

It seems that the ability to integrate knowledge essential for the development of translation as a human skill involves and possibly starts at the level of bilingual knowledge. First of all the knowledge components underlying the use of two languages have to be integrated including linguistic competence/knowledge, pragmatic knowledge and metalinguistic knowledge. The integration however is always responsive to the communicative needs of the situation in which we want to use language. In our L1 communication we rely on linguistic competence and pragmatic

knowledge but when needed we will rehearse our words and make a conscious metalinguistic effort to find the most pleasing or most hurtful ones. In L2 communication we will consciously monitor our performance to protect ourselves from grammatical errors, we will more clearly assess the socio-cultural context not to come across as somebody impolite using for example, pragmatically inappropriate forms of address. In translation we are constantly manoeuvring between the two systems with their intricate socio-cultural connections. Frequently we are treading on thin ice and self-confidence that the situation is manageable and that we will remain in control comes from our trust in the ability to integrate all the necessary knowledge for the task at hand. The precise parameters are different for every translation task. The outcome of the knowledge integration process is different and of different use for every translator depending on the stage on the developmental continuum but the general principle of activation and integration is always there. What is more, the effect of the ability to integrate knowledge results not only in conceptual activation but also in lexical activation by either producing a priming effect on lexical access or informing the translator that there are gaps in knowledge and external sources have to be used to provide information and vocabulary. As such an adequately created KIN stimulates and activates the translator's long term memory, the translator's most important tool (Bell 1991, Wilss 1999). Research shows that inexperienced translators frequently become locked in at one knowledge domain, e.g., the lexical knowledge. Although memory navigation is an essential aspect of the translation process and significantly decisive in terms of the speed and quality of the translation performance it has not received extensive attention confirmed by empirical data. KIN attempts to provide a theoretical framework in which the human skill to translate relies heavily on the enhanced retrieval capacity from the translator's LTM and/or on the research skills to find and apply whatever is unavailable in the internal memory in external memory archives (these include reference books, dictionaries, data bases, and recently most frequently the Internet).

It is self-evident that today's technology has transformed the way translators integrate knowledge and create intricate active networks which provide background knowledge, facts and terminology needed to translate a particular text. As predicted by Wilss (1999) thanks to IT and CAT tools knowledge is literally available at one's fingertips and the capacity for storage and the retrieval of information is being constantly expanded. Still the

need to select and integrate what is adequate for a particular translation task remains the responsibility of the translator. Kelly (2005) makes an interesting observation and notes that experienced translators of today might have quantitatively more knowledge in their personal database whereas those who train to be translators at the present moment instead of having a lot of declarative knowledge themselves possess better research skills and know where to search for what they need to know. In both cases the experience of building an adequate KIN will result in memory traces each and every translation experience leaves in the translator's LTM. These traces become stored in the LTM and can be reactivated in future tasks. As a result, when translating in well known domains and scenarios the translator will rely on his/her routine performance (i.e., quick lexical access via lexical links) especially when the demands placed on the translator seem to exceed his/her processing capacity. It is only through automatizing certain subtasks that a complex skill such as translating can be developed to the level of expertise. Wilss (1996: 102) put it briefly: "as experience with translation increases, the demand of cognitive expenditure decreases". It seems that the process of developing translation expertise as the highest stage in the evolution of translation as a human skill can be seen as the growing ability to perform all the multitasking within the limited capacity of the human mind. This multitasking is achieved through knowledge integration which is needed to translate with efficiency. The ability to integrate knowledge can be developed either through translator training or through self-learning and self-coaching. Accordingly, the translator devoted to expertise acquisition can be perceived as an expert learner, a systems intelligent person who by practice combined with self-reflection develops his/her professional self-confidence. Finally, it has also been suggested that affective factors play an important role in the process of translation expertise development seen as the ability to integrate and apply knowledge.

The proposal of KIN discussed in this chapter might seem yet another theoretical speculation. Many questions arise: Can it be empirically tested? How and where can we find evidence that depending on the stage of translation skill development, the translator will differ in his/her ability to integrate knowledge? It seems unlikely that this particular aspect of translation skill can be thoroughly researched within one discipline of Translation Studies. It is much more probable that an interdisciplinary effort is needed including such disciplines as psychology both experimental and cognitive, psycholinguistics and neurolinguistics which due to their

research methodologies and rampant recent technological advances have a lot to offer in this respect. The words of James Holmes (1988), come to mind that ‘we should go back to a laboratory’ in order to hypothesize and test our hypotheses in empirical studies. Chapter 6 and 7 are a modest contribution to empirically validate the hypothesized ability to integrate knowledge in the process of translation expertise development.





## Chapter 6

# **Empirical investigation into knowledge integration in translators – a questionnaire study**

The purpose of this chapter is to empirically verify the emergence and development of the ability to integrate knowledge in the process of the evolution of translation expertise. Drawing from the available understanding of translation as a human skill and recognizing its bilingual foundations, the theoretical proposal of a Knowledge Integration Network discussed in chapter 5 will be tested from two complimentary vantage points, the translator and the translation process. This chapter will analyze the first pool of data in which the Knowledge Integration Network will be sought. The data comes from questionnaires completed by translators who occupy different stages on the evolutionary continuum of their translation skill development. The groups of subjects are described with reference to their bilingual foundations and their translation experience. The purpose of each questionnaire is described and the data are analyzed with respect to the theoretical proposal of perceiving the progression on the continuum of translation skill development as a process of knowledge integration. The detailed analysis of the views and opinions of potential and practicing translators is carried out in line with the evolutionary perspective presented so far in this work. The discussion of the results aims at detecting implications for the educational purposes of translator training as well as at pointing to further research into the development of translation as a human skill.

### 6.1. The purpose and the subjects of the questionnaire study

The aim of the questionnaire study was to gather data from a statistically relevant number of people, who are either potential or practicing translators, and whose opinions can be analyzed to provide a representative profile of a translator-to-be and a translation professional who earns a living providing translation services. A battery of questionnaires included differ-

ent sets of questions prepared for each of the four groups of respondents. Some questions appeared in all the questionnaires and some were specific to the stage the subjects occupied on the developmental continuum as translators. The assumption behind the questions chosen for the study was that by sharing views and experience the subjects will shed some light on the development of the human ability to translate, and support the theoretical proposal of knowledge integration networks (KINs). Both the questionnaire method and the purpose of the investigation meant that this part of my research did not aim to test hypotheses but intended to present a broad picture of those who are involved in translating, either as EFL students who might seek career in translation, or as professional practitioners. The observational data was then subjected to a detailed analysis with respect to the proposal of KIN presented in chapter 5. The subjects were randomly chosen to represent a particular stage in the development of their translation skill, ranging from absolute novices to professionals with up to 40 years experience in translation.

The first group of subjects (1BA) consisted of 80 students of English as a Foreign Language at the end of their 1BA year in the School of English at Adam Mickiewicz University in Poznań, Poland which is the largest centre for English studies in Poland and in Europe. The School of English has the reputation of high standards of teaching English as a foreign language and many students come from all over Poland to study English and become teachers, translators or language experts employed in various areas. The courses offered to 1BA students apart from some content courses run in English, such as British/American literature or linguistics and cultural studies, focus on the development of the four basic language skills speaking, listening, reading and writing. There is no translation course offered to 1BA students which allows to treat them as a group representing absolute beginners in translation, but also as a group of potential translators if they decide to pursue such a career in their future professional life. At the time of the questionnaire the 1BA students had just completed their first year of studying English in a structured learning environment at university level. In a way their bilingual foundations have only begun to be structured. In terms of language proficiency, having passed the final Practical English exam (PNJA which stands for the Polish *Praktyczna Nauka Języka Angielskiego*) they are at the level comparable to grade B/C of the CAE (Cambridge Advanced Exam in English). The questionnaire prepared for the 1BA group aimed to elicit the subjects' personal ideas about translation as a profession

and activity. Indirectly, it also elicited their assumptions and expectations about the necessary skills expected of translators.

The second group of subjects (2BA) consisted of 40 students of English as a Foreign Language at the end of their 2BA year at the same department as the 1BA group. At the time of the questionnaire they had just completed the second year of studying English in a structured learning environment at university level. In terms of language proficiency having passed the final Practical English exam for 2BA they are at the level comparable to grade A of the CAE (Cambridge Advanced Exam in English). The 2BA group apart from having studied English at university level for two years had attended a translation course. Although the translation course is not meant to prepare the students to become professional translators but it aims to improve their language proficiency, it nevertheless is structured according to the professional understanding of the nature and purpose of translation. In this way during the translation course the 2BA EFL students experience translation as an activity and become aware of the challenges and requirements which are involved in intercultural communication via translation. The tasks range from translations of short non-literary texts in several areas chosen for a yearly course (e.g., sport, business, mass media, tourism, politics, etc.) to field work projects which aim at raising awareness of the communicative function of translation as a service to community. Tasks also include critical evaluations of translations available on the open market (e.g., restaurant menu translations, tourist information available on the Internet, etc.). Initially students translate from English, their foreign language into Polish, their native language, and in the second semester they also translate from Polish into English. As for classroom procedures most work is done in the spirit of cooperative learning, including collective effort and open discussions of translation problems. Peer correction is frequently used to encourage taking the receiver's perspective on a translation as a finished product. Experience shows that through translation students become more aware of language as a tool and develop their metalinguistic ability as well as metacognitive skills practiced during the translation process (see chapter 3). The questionnaire prepared for the 2BA group aimed to elicit some information about their bilingual foundations as well as the subjects' personal opinions about translation as an activity. Following their personal experience of translation the questions included issues referring to the effect translation experience has had on their language skills, with the as-

sumption that their answers might provide support for the developing ability to integrate knowledge in the initial stages of the evolution of translation as a human skill.

The third group of subjects (2MA) included 40 students of English as a Foreign Language at the end of their final year at university. Most of them will work as teachers of English or as language experts employed on the open professional market, some might pursue careers in translation. At the time of the questionnaire they had just completed the second year of their MA programme pursuing the study of English at a highly advanced level in a structured learning environment at Adam Mickiewicz University in Poznań. They had all passed their last practical English exam at the end of their 1MA year. In terms of language proficiency having passed the final Practical English exam for 1 MA students they are highly proficient at the level comparable to grade A/B of the CPE (Cambridge Proficiency Exam in English). Apart from the translation course which is obligatory for the 2BA students, the 2MA students had not been exposed to any more translation practice in a structured learning environment. The questionnaire prepared for the 2MA group replicated some of the questions prepared for the 2BA group. The questions were aimed at assessing the subjects' bilingual foundations relying on their self-assessment as well as at eliciting their opinions about translation as an activity. The specific interest was in any detectable changes in the subjects' opinions about translation as an activity and the required skills between the three groups of potential translators (1BA, 2BA, 2MA).

The fourth group of subjects included 40 professional translators (PT)<sup>1</sup> who have been providing translation services on the open market. Compared to the three previous groups, the group of professional translators was the least homogenous in terms of age and professional experience as practicing translators. There were 12 translators with professional experience from 1 to 9 years, 17 translators who have been providing translation services for 10 to 19 years and the remaining 11 translators have been in the profession for 20 to 40 years. The vast majority of the professional translators were members of the Association of Polish Translators (*Stowarzyszenie Tłumaczy Polskich*), which is the oldest association of professional translators in Poland and the only one that gathers translators of all specializa-

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<sup>1</sup> I use the term professional translator as synonymous with practicing translator, i.e., providing translation services on an open market.

tions, literary and non-literary, written and oral. Being listed as a member of the Association is in a way a guarantee of high professional standards as to become a member of the Association one has to meet strict requirements (see the STP webpage at: <http://www.stp.org.pl/>). Since in Poland like in many other countries (e.g., the USA) accreditation is not required to provide translation services there are many translators who are providing translation services and enjoy a good reputation while not being members of the Association of Polish Translators. In this respect their length of practice seems the best indication of their professional standards (see Shreve 1997, Chriss 2006, Gouadec 2007). For the majority of the translators (35) Polish was their native language, L1 (language A in the TS terminology) and English was their first foreign language, L2 (language B in the TS terminology). There were 2 natural bilinguals (English-Polish and Polish-German) and 3 translators for whom English was their native language (language A) and Polish was their language B. A vast majority of the professional translators who filled out the questionnaire are freelance translators and providing translation services is for them not their only source of income. Some of the translators who responded to the questionnaire are currently employed in the EU. In other words the only criterion for all the respondents in the fourth group (PT) of the questionnaire study was providing translation services on an open market. The questionnaire prepared for professional translators aimed at eliciting information about their educational background, bilingual foundations, attitude to translation as an activity and specific procedures applied when translating. The last set of questions encouraged the professional translators to reflect upon their professional career, and if possible give advice to beginning translators.

All the groups of subjects completed their questionnaires anonymously and voluntarily. Although, the questionnaire for professional translators was sent by e-mail, the identity of the respondents was not in any way considered in the study. All the respondents did not receive any incentive or remuneration, apart from my gratitude and sincere thanks for sharing their experience in a collective endeavour to increase our understanding of translation as an activity, as a human skill and as a profession.

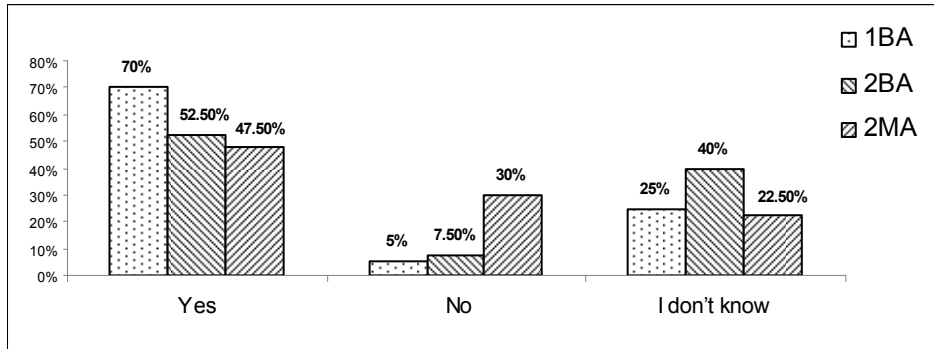
## 6.2. Discussion of the results

The results will be discussed in the evolutionary perspective of translation skill development. Starting with ideas and assumptions about translation

as a profession and as an activity through investigating the subjects' bilingual foundations on which translation expertise can be built, the focus is next shifted to translation professionals. The answers provided by the practicing translators to 50 questions, as well as the comments they left on the questionnaires were analyzed to provide empirical data on the evolution of translation as a human skill. The invaluable assistance of all the subjects who participated in the questionnaire study, with the practicing translators as the most precious informants, has allowed to draw a developmental profile of a translator which will be discussed in detail in the sections below and with reference to the hypothesized ability to integrate knowledge.

#### 6.2.1. Translation as a profession – assumptions and facts

A lot has been said about the lack of recognition and respect for the work of translators in Translation Studies (cf. Hejwowski 2004, Snell-Hornby 2006). Contrary to the rather disillusioned underappreciated voices among those studying the working conditions of professional translators which focus on drawbacks rather than advantages, translation as a profession enjoys popularity among foreign language students. The results show that beliefs about the profession are very positive among the 1BA group. As many as 85% see the job of a translator as interesting, 70% would like to pursue a career in translation in comparison with a mere 5% who stated that they would not like to work as translators in their future professional life, and 25% who chose the 'I don't know' answer to the question: "In your future career would you like to use English and work as a translator?" The willingness to become a professional translator in future remains quite high for the 2BA subjects, but it is significantly lower for the 2MA group with 47.5% of those who would like to work as translators as compared with 30% who do not see themselves as translators, and 22.5% who remain undecided. The graph below shows the changes in the subjects' response to the question whether they would like to work as translators in their future professional life.



Graph 1. EFL students' willingness to take up a career in translation.

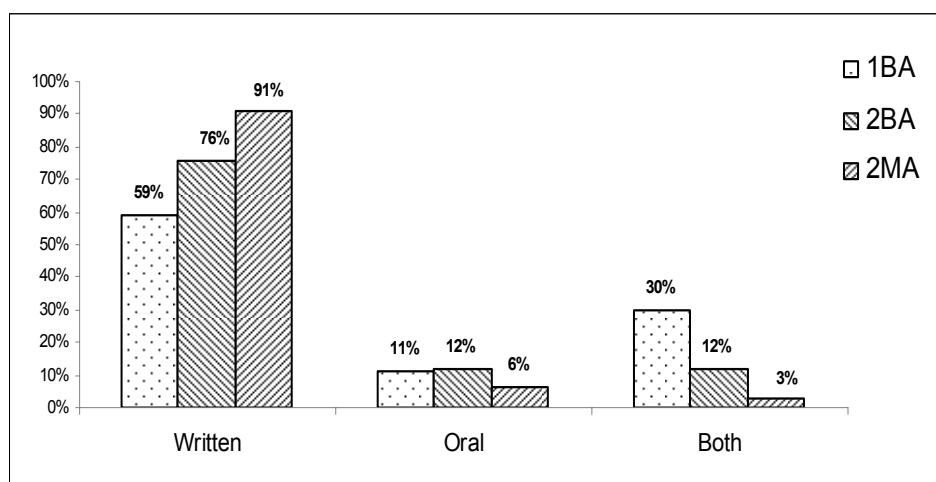
The results show a gradual decline in the percentage of the EFL students who would like to become translators. It is possible that the overwhelming 70% of the 1BA students hold an idealized view of a translator at work, which is frequently shared by those who start to learn a foreign language. The majority of 1BA subjects see the job of a translator as appealing, interesting, important and prestigious. This interpretation is corroborated by the answers given by the subjects when asked to state three reasons why they would like to work as translators. The most popular reasons were economic, including good pay followed by prestige, rewarding work, interesting (you constantly learn new things), challenging work, fun, flexible working hours and work needed on the market. These positive features of the translating profession are, nevertheless, accompanied by a more realistic view. When asked to state three reasons why they would not like to work as translators, the 1BA subjects came out with the following lists of reasons: stressful, monotonous, dull, doesn't pay well, hard work, pressure, responsibility for making mistakes. Counterbalanced by these negative features assumed to be a part of a translator's life as a professional, the positive assessment is perhaps not idealized but lacking in experience. However, this is also not entirely true since out of 80 1BA subjects as many as 70 (87.5%) said that they had translated a text for somebody else.

This report of prior translation experience in 1BA students confirms that translation as a skill is expected of bilinguals, and by many lay people assumed to be a part and parcel of being able to use two languages for communication. It is nevertheless quite likely that although the 1BA subjects

experienced producing a translation for somebody else, they had never received structured feedback on how they actually performed but most likely self-discovered that it is not as simple as they themselves had expected. Still, testing the 1BA students with respect to the expectations that they associate with the job of a translator reveals the beginner's perspective.

More detailed assumptions about the skills and qualities of a professional translator were elicited from the 1BA group indirectly by asking the respondents to give three reasons why they themselves would (or would not) make a good translator. The most frequent reasons why the 1BA subjects felt they would make a good translator were included in the following answers: I'm creative, I have a rich vocabulary, I have wide interests, I'm confident, I like learning, I enjoy writing, I'm a keen reader, I enjoy playing with words, I'm communicative, I'm imaginative, I'm flexible, I'm meticulous. On the other hand, the reasons why some 1BA subjects felt they would not make a good translator having themselves not much experience in translating were included in the following answers: I need to master the L2, I have grammar problems, I have problems with remembering vocabulary, I lack self-confidence, I lack self-discipline, I'm nervous when speaking in public. The above data show that the 1BA students have an idealized view of the profession but they nevertheless are aware of the necessary skills intrinsic to the job of a translator. What is more, the subjects in all of the groups of EFL students stated their preferences for the kind of translation they would like to perform. The changes in the preferences for oral versus written translation, or possibly both kinds of modalities are also significant and point to the growing awareness of translation as a skill. As the graph below shows it is written translation which seems to be a preferred kind among all the subjects starting with 59% for the 1BA group, it goes up to 75% for the 2BA group, and finally reaches 91% for the 2MA group.





Graph 2. EFL students' preferences for oral versus written translation.

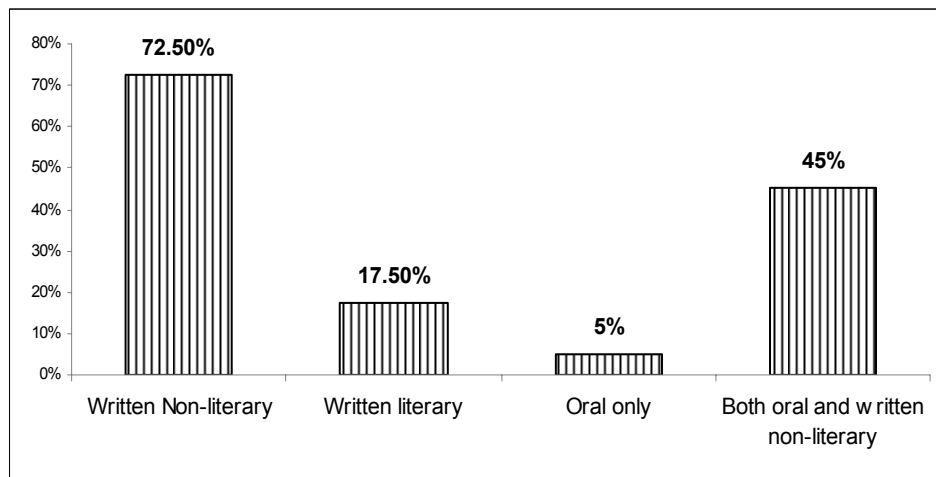
The preference for oral translation (interpreting) only is low at 11% for the 1BA group and 12% for the 2BA group, and it further drops to 6% for the near graduates (2MA group). Similarly, the percentage of those who express their interest in both kinds of translation drops from 30% for 1BA to 12% for the 2BA and down to 3% for the 2MA group. A possible explanation of the growing preference for written translation, and the decline in the number of EFL students who express their interest in becoming interpreters includes their growing awareness of the requirements of the task due to experience gained in translation classes. No matter how limited this experience is, as compared to the experience available in translation training programmes, the results show that the EFL students become aware of the psychological demands which are intrinsic to the task of interpreting (including all its kinds) such as an excellent ability to concentrate and divide attention between listening, understanding what is being said and producing what has been said in the TL. The constant need for multitasking while remaining in control of the flow of communication, as well as coping with time pressure and stress caused by being a vital link in the intercultural communication (see Shlesinger 2000, Pöchhacker and Shlesinger 2002) is too demanding for many EFL students. Further job requirements for interpreters include excellent interpersonal skills, public speaking skills, the ability to cope with the unexpected, and finally the readiness to travel and provide in-

interpreting services when and where they are needed are discouraging to many language students. These high demands are able to be met only by a small number of EFL students (Angelelli and Jacobson 2009), especially as they get closer to making final decisions about their future professional life just before they graduate. Possibly the majority of the EFL students, by the time their five years of intensive language studies are over, have already discovered that the requirements of interpreting as a professional career do not match their language skills, as well as their personality profile (see Schweda-Nicholson 2005: 109). They might more readily see themselves as freelance translators who do not have to appear in public but work usually in the privacy of their own home. Obviously though freelancing as a translator means that the income is never guaranteed therefore it is frequently seen as a secondary source of income to supplement an elsewhere earned salary, usually in teaching English as a foreign language.

This interpretation is confirmed by the data collected from questionnaires filled out by professional translators. A vast majority of the respondents described themselves as freelance translators. Out of 40 professional translators 80% described themselves as freelance part-time translators and only 20% described themselves as full-time translators. Out of those 2 translators were also running their own translation companies and 6 were employed in the EU translation services. For 45% of the professional translators, providing translation services is the sole source of their income whereas for 55% percent of the respondents providing translation services supplements their income earned elsewhere. Out of 27 freelance translators who provide translation services part-time there were 16 university lecturers, 1 PhD student, one editor, two retired academics, one retired engineer, a former academic teacher, one psychotherapist and a person employed in banking. Four respondents did not specify their major career although marked that translating is not their only source of income.

As for the kind of translation services provided by the respondents, the results differ a lot from the preferences reported by the EFL students, in the sense that the largest number of the professional translators (18 out of 40 = 45%) declared that the services they provide include non-literary written translation and interpreting. There were 11 professionals who specialized in written non-literary translation, 7 who dealt with written literary and written non-literary texts. Only 2 professionals out of 40 were providing interpreting services only and 2 translators marked all kinds of

translation, that is written literary, written non-literary and interpreting services. No respondents marked the written translation of literary texts as the only kind of services provided by them. The graph below shows the distribution of translation services provided by the respondents.



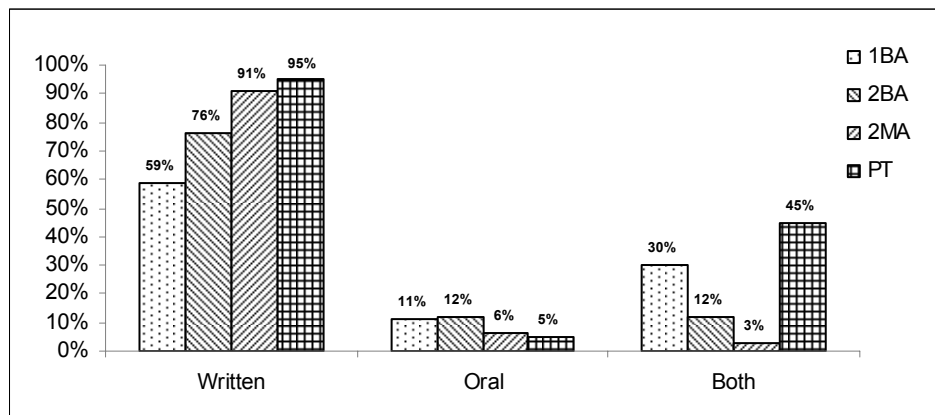
Graph 3. The distribution of translation services with respect to modality and kind provided by practicing translators.

The distribution of translation services shown in the graph above is probably a reflection of the market demands. The majority of texts which need to be translated on an everyday basis are most likely non-literary, including all the translation for the tourist industry, business, press agencies, documents, brochures, manuals, academic papers, etc. The translators' readiness to provide such services is a response to the market demands, as well as the result of their business-like approach to their profession. Not surprisingly then, as many as 38 translators (95% of all the respondents) provide such comprehensive services.

It is interesting to note that literary translation was not marked as the only kind of service provided and that the seven translators (17.5%) who marked providing translation services of literary texts were also involved with the translation of non-literary texts. This can probably be explained in terms of economy. Translating novels, for example means taking up long-term projects, and unless one has a good publisher who will pay advance money, the income is delayed until the translation is accepted by

the publisher, or might be delayed until the book is published. This result shows that, as it has been advocated by many TS scholars, the division between literary and non-literary translation is probably irrelevant from the translator's point of view. Consequently, all the disputes whether translation is an art or a craft seem unproductive when in today's professional world translation means business (Sofer 2006, Chriss 2006, Gouadec 2007). The basic stock of skills required to translate is probably the same for non-literary and literary translation but some additional qualities might decide about the preferences to take up literary translation or interpreting (Gile 1995/2009, Tabakowska 2003, Piotrowska 2007). The latter seems especially interesting with only two respondents (5%) focusing on providing exclusively interpreting services. However, when grouped with those translators who opted for both non-literary written translation and interpreting as many as 50% of all the respondents said they were ready to provide their services as interpreters.

The results showing preferences for oral versus written translation elicited from the professional translators are below matched with the expectations and preferences expressed by the EFL students to show the change in the distribution of translation services with respect to both modalities.



Graph 4. Differences in the distribution of modality preferences between potential and professional translators.

The changes in the distribution of the preferred modality by practicing translators show that professionals, possibly with experience, become more versatile in the services they can provide. Although the division

between written translation and interpreting is generally agreed upon and not many scholars would question the different demands both kinds of translation place on the translator/interpreter (Gile 1995/2009), it is possible that from the translator's point of view both translating and interpreting draw from the same pool of expertise and require knowledge integration. Experience gained in both written translation and interpreting remains available for future tasks, and is potentially able to refine the skill of integrating knowledge (KIN) in the translation process. This indicates that the skill of integrating knowledge is transferable irrespective of the modality, in which the process of translation will be finalized, either as a text or as speech. Although these issues require a more thorough analysis, it is possible that the experience gained in interpreting and in written translation is mutually beneficial for translating in both modalities, and yet it requires differently distributed attention and different mental effort management in the process. To sum up, with respect to modality, the preference for written translation expressed by the EFL students remains valid for the professionals, however, there is a tendency to combine the services of interpreting and written translation among practicing translators. Does it mean that with time and experience professionals become more versatile in terms of modality and the focus on one modality (2 out of 40 focused only on interpreting) is an exception rather than a rule, or is it again a response to the market demands? Further data might shed some light on the specialization issue.

In response to the question, 'Do you specialize in particular fields (registers?)', 'No' was a rare answer. Only 26% of the translators stated that they do not specialize in specific domains but are ready to translate any text if commissioned to do so. The majority of 74% stated that they do specialize in certain specific areas. Quite frequently the respondents listed more than one area and often there were several related fields mentioned, for example, finance, banking, law, marketing or philosophy, psychology, popular science, or medical sciences, chemistry, biology, or popular science, non-fiction literature, children's books. Rarely the areas mentioned were unrelated, e.g., IT, science, history or musicology, legal language, property. One respondent who specialized in engineering and technology included a comment, 'but not exclusively and depending on the market situation'. One professional translator in response to the question, 'What advice would you give to a beginning translator?' said, 'choose an area and specialize in it'. The results thus show that the majority of professional translators are not,

as it might seem to some, a 'Jack of all trades, master of none'. They might be versatile as far as modality is concerned but as far as knowledge domains are concerned they do prefer to specialize in some areas.

This result is clearly supporting the proposal of a Knowledge Integration Network (KIN). Specializing in a certain area the translators are accumulating factual knowledge and linguistic means to express concepts and terms familiar to a specialist in the area. Every translation task will require integration of the knowledge kin to the task which will become integrated and ready for use. When KIN is set in motion, the conceptual activation will, at least in theory, prime access to linguistic means in the target language or will inform the translator about the need to acquire either the knowledge and/or the linguistic means, which are not available in the translator's memory to express the conceptual content of the SL text for the TL readers. Clearly, the richer the conceptual base for a given area the faster the process of building a KIN should be for a new text, and consequently the faster the translation process which follows. Indeed, one translator advised the beginning translators not to accept a job in an unknown domain unless for their self-educational purposes.

Relying on the data presented in this section, it can be tentatively concluded that the principle of knowledge integration networks (KIN) for the purpose of translation is assumed even by beginner translators. Although beginners focus more on the need to consolidate and integrate their bilingual knowledge, the clear preference for specializing in certain areas expressed by practicing translators points to the role of knowledge integration in the translation process. However, it seems that what stretches between potential translators and the practicing professionals is a developmentally different attitude to knowledge integration. For inexperienced translators, or for those with limited translation experience, the integration is local and includes only the two languages. For experienced practicing translators the integration is global and includes their entire knowledge base (also the extralinguistic declarative knowledge) resulting in the preference for specialization in some chosen areas. The differences in the ideas about translation as a profession and the dynamic changes which were discussed in this section allow one to expect that there are major transformations in the students' ideas about translation as an activity. Matching the novices' views against the practitioners' accounts in this respect may throw more light on the evolution of translation as a human skill.

### 6.2.2. Ideas about translation as an activity

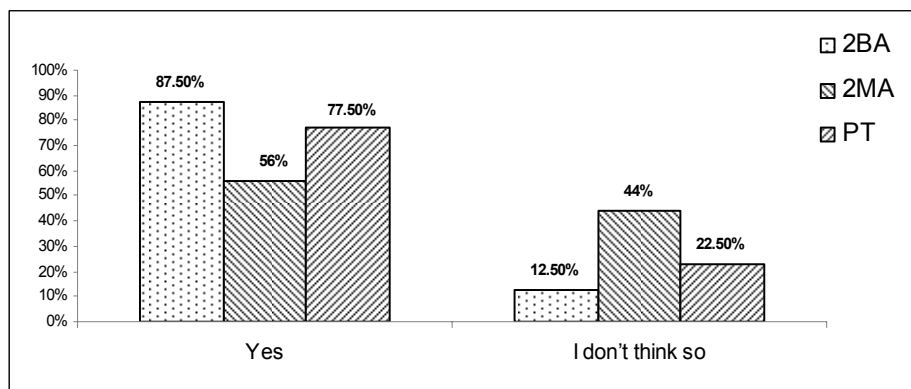
When asked to assess whether translating was in fact more difficult than they had expected 77.5% of the 2BA group admitted that it, indeed, was. This significant majority of the 2BA subjects must have shared common expectations that the skill to translate is simply a matter of knowing two languages (cf. Paradis 2005, Whyatt 2010). Most likely these expectations have become verified by their own translation experience and the corrective feedback they have received during their yearly translation course. These results also point to the educational effect of translation practice on the subjects' changing ideas about translation. The growing awareness that translation is not an easy task of switching between the two languages remains with the EFL students even three years after they had participated in a translation course. As many as 75% of the 2MA subjects still admitted that translating was more difficult than they had expected (see Whyatt 2008, 2009b). Both groups of subjects with the same overwhelming majority of 87.5% agreed that translating takes a lot of time and effort. In both groups of subjects the majority of 65% in the 2BA group, and 72.5% in the 2 MA group admitted that they needed to make breaks when working on a translation task. What is more as many as 87.5% of the 2BA subjects considered translation to be a tiring activity as compared with 56% of the 2MA subjects who reported that after translating a text they felt very tired. This finding might summon two interpretations; one that there is a correlation between the L2 proficiency and the mental effort needed to translate. The second possible interpretation might point to the subjects growing ability to integrate knowledge when translating. It has to be borne in mind, however, that the translation experience is fresh and recent for the 2BA subjects as they have just completed their yearly translation course, therefore their judgement is empirically more valid. Since the 2MA students might have lacked this fresh experience of translating having completed their translation course 3 years prior to the questionnaire, their judgement might be more theoretical than practical.

The question which still remains open is whether translating as an activity is, indeed, a high energy consumer. Although, it is somehow admitted that it is demanding in terms of mental effort that the translator has to expense, there is very little research done into mental effort management during the translation process (with some exceptions mentioned in chapter five, see also Gile 1995/2009, Séguinot 2000, Whyatt 2010). The Polish charter

of translator's rights and responsibilities issued by *Stowarzyszenie Tłumaczy Polskich* [Association of Polish Translators] specifies that the number of pages which can be expected to be translated daily should not be more than 5 standard pages, where a standard page consists of 1,600 characters including spaces. These recommended amounts of text for translation are something clients are often unaware of. It is not uncommon that their expectations of the speed with which a translation can be produced are in sharp contrast to the recommended 5 pages per working day. The questionnaire results show that for the vast majority of practicing translators, translating as an activity is a high energy consumer. As many as 31 translators out of 40 (77.5%) said that translating is a high energy consumer whereas only 22.5% said that they do not think so. One translator included a comment that translating is tiring but it, of course depends on the kind of the text, time available and "own well being", another one added "tiring but highly rewarding". One respondent included an explanatory comment quoted below:

On a personal level, I find translation can be tiring, particularly when I have to spend time in front of the computer for so many other things. Yet, increasingly I find that the solution to this is physical exercise, so in some ways one could say translation does not consume *enough* of my *physical* energy. I may be unrepresentative here in that I do not find writing tiring in the same way as I find speech tiring (with many people this is the other way round). Interpreting fatigues me hugely – both physically and mentally – and generally I avoid doing it wherever possible.

The graph below shows the assessment of translation activity as a high energy consumer in the three groups of respondents discussed above.

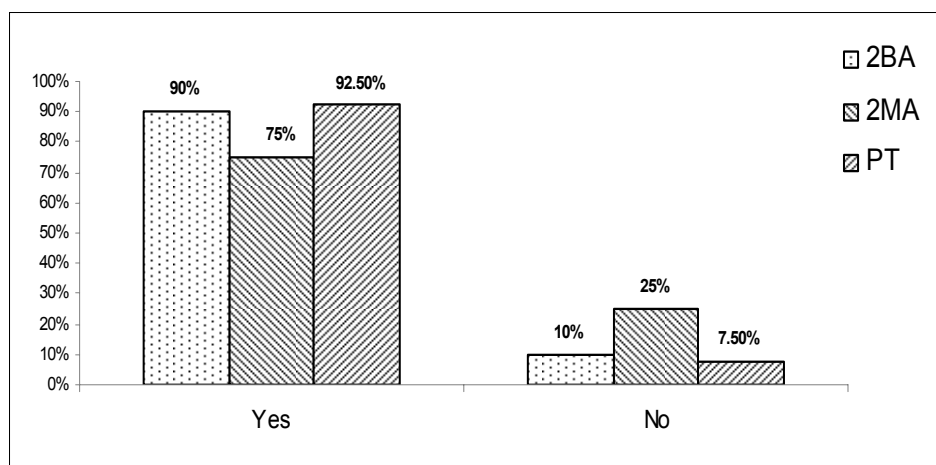


Graph 5. The assessment of translation activity as a high energy consumer.



The fact that for the majority of subjects in the 2BA and 2MA groups translating was perceived as a difficult and tiring activity was nevertheless insignificant for the generally positive attitude the subjects had towards translating. As many as 90% of the 2BA subjects said that they enjoyed doing translation tasks and as many as 75% of the 2MA subjects were still of the same opinion (cf. Whyatt 2008, Sewell 1996, 2004).

I also asked professional translators whether they enjoy translating as an activity. The results show that the vast majority of 92.5% admitted that they do enjoy translating. One out of the 37 translators included a comment, “love-hate relationship at times”, three translators who did not enjoy translating also left comments saying, ‘but it depends on the text’, ‘rather no but it has some good points’, ‘I enjoy it only sometimes’. This vastly positive attitude towards translating as an activity displayed by professional translators in terms of work psychology must have a beneficial impact on how they carry out their work as well as on their motivation and sense of self-fulfilment (see Graph 6).

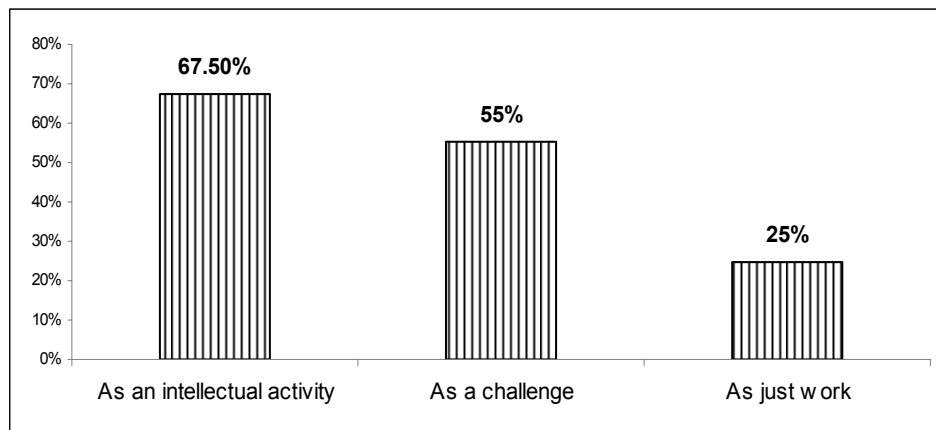


Graph 6. Assessment of translation as an enjoyable activity.

As it was mentioned in chapter five the affective factors involved in the task of translating have not been granted due attention, yet their role seems significant in the development of translation as a human skill to reach the level of expertise, as well as in the maintenance of that skill. A positive attitude to translation as an activity enhances the learning process in which translation skill is developed. A question, ‘Is translation for you

a rewarding activity?’ was directed to practicing translators and they were offered three answers to choose from: a) ‘yes’, b) ‘no’, c) ‘only sometimes’. The majority of 29 translators chose ‘yes’, one translator added, ‘although it does not pay’, 10 translators chose ‘only sometimes’ and one said, ‘quite rarely’. Generally, then, translating is a rewarding activity for practicing translators. This positive assessment of their work is comparable to the positive assessment of the EFL students, who had experienced translating in the course of their language studies and in the vast majority, said that they had a clear sense of achievement when they had completed a translation task (Whyatt 2009b).

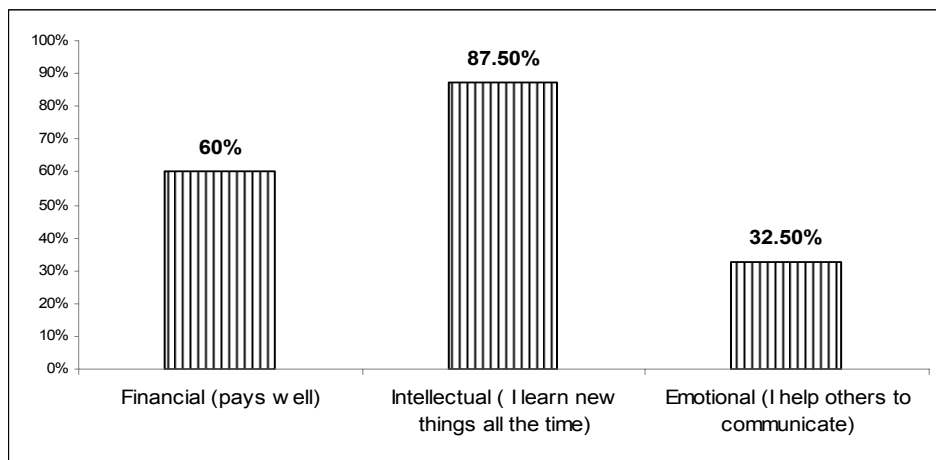
Another question aimed at eliciting information indicating how professionals approach translation was phrased in the following way: ‘How do you treat the translation of a new text?’ The graph below shows the distribution of answers.



Graph 7. The professional translators’ approach to a new text.

Bearing in mind that the practicing translators could mark as many answers as they felt appropriate, as many as 67.5% said that they treat it as an intellectual activity, 55% marked ‘challenge’ and only 25% marked ‘just work’. Out of those translators who marked ‘just work’ only 5 chose it as the only answer. Interestingly, four translators who said that they treat translation as just work had full time employment as translators and only one was a freelance translator. Those for whom translation was just work were in the clear minority, whereas for the vast majority of translators the translation of a new text is rather an intellectual activity and a

challenge. This result confirms the role of affective factors present in creative problem solving involving knowledge integration in the search for solutions. It seems that for a career in translation to be fulfilling and satisfying there seems to be the need for interplay between the physical, the intellectual and the emotional domains of human experience (Sofer 1997/2006). A similar conclusion arises from analysing the reasons which keep translators in the profession shown in graph 8.



Graph 8. Reasons which keep practicing translators in the profession.

Again here most respondents chose more than one reason, some felt all of them applied in their case, only 4 out of 40 (10%) chose the financial aspect as the sole motivation for being in the profession. The fact that such a vast majority of professional translators appreciate the fact that through translation they constantly learn new things and find their work intellectually rewarding is significant in the context of KIN proposed in chapter five. A comment left as advice to beginning translators illustrates the point:

Treat translating as a challenge – it will provide you with an opportunity for change, development and improvement in many ways: professionally and personally. Enjoy working with words, phrases and generally texts! The attitude is very important.

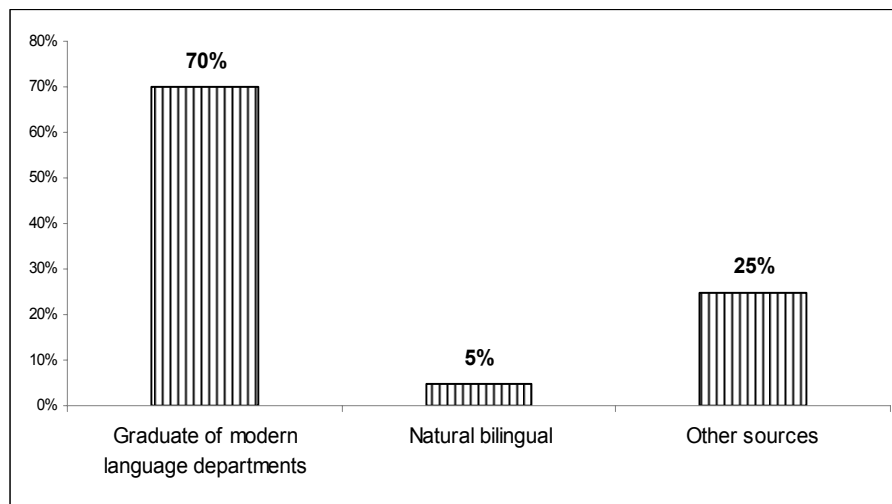
It seems that the repeated experience of knowledge integration will significantly integrate language skills with all the knowledge structures activated and integrated for a task at hand. Since however, bilingual knowledge is a

dynamic function of one's language learning history (see chapter 2), and as such is always open to improvement more insight into the bilingual foundations of all the groups of subjects might reveal some interesting points.

### 6.2.3. Bilingual foundations of translation as a human skill

It is not an overstatement to say that it is bilingual knowledge that provides a critical link in all the knowledge structures which have to be activated and integrated for translation to take place. In this section I would like to present some data aimed at providing a real life illustration of bilingual knowledge (see chapter 2) in the three groups of subjects, 2BA, 2MA and the PT group.

In the questionnaires prepared for the three groups of subjects, a set of questions addressed the subjects' language acquisition history and self-assessment of their bilingual knowledge. Since it turned out that out of 40 professional translators there were only two natural bilinguals (5%) and as many as 28 (70%) were graduates of modern language departments comparing the three groups of subjects seems justified. The graph below shows the different routes to learning language B in the group of practicing translators.



Graph 9. Different language acquisition histories among practicing translators.

To provide more statistical data on their language acquisition history, all the subjects were asked to specify when they started learning their first

foreign language. Interestingly the largest number of subjects from the group of professional translators started to learn their foreign language at 10 to 19 years of age, there were three professional translators who started to learn their working foreign language at the age of 20, 23, 26. They would probably constitute interesting case study subjects for the opponents of the critical age hypothesis in SLA studies (Singleton and Lengyel 1995, Mitchell and Myles 1998). The average age of onset for learning English in the 2BA group was 8.8, and 9.8 for the 2MA group, and slightly later at 10.7 for the PT group.

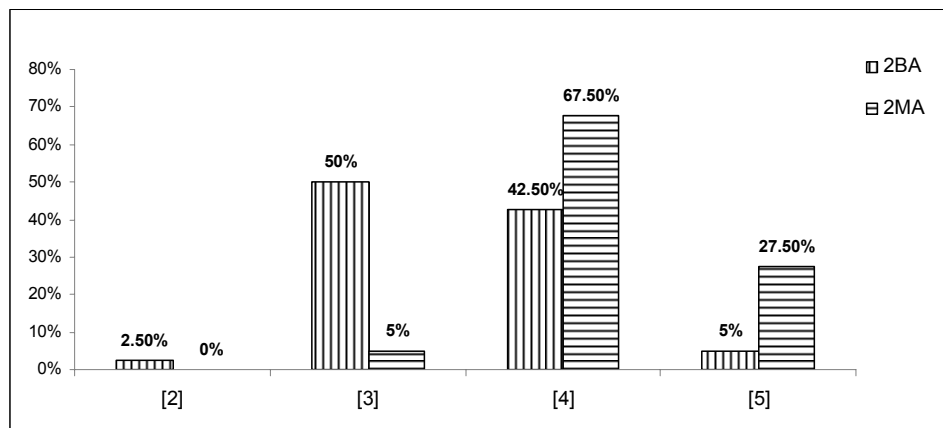
All students from the 2BA and 2MA groups agreed without exception that learning a foreign language is an intellectually enriching experience. When asked to give reasons why they decided to study English at university level most of them stated that they simply like English (90% for the 2BA subjects and 97.5% for the 2MA subjects) and/or are interested in culture of English speaking countries (35% and 47.5% respectively).

It still remains to be specified what exactly lies behind the statement 'I like English'. One can only surmise that the positive attitude towards the language, which one decides to study in depth and master the skill of using it, reflects the learner's cognitive make up which allows him/her to draw pleasure from learning a different system of communication. The relationship between such affective factors and motivation as well as the ultimate attainment of the L2 constitutes an interesting area of study for SLA scholars, as well as for TS scholars interested in translation training. Possibly some more explanation could be derived from personality research which could correlate the love for languages with specific personality types which are more inclined to enjoy learning languages, and which can achieve the highest level of attainment, near native-like competence (see Paradis 2009) so much desired in translation trainees (see Snell-Hornby 1992). These issues are still open to research. For the time being, it is clear from the data that the EFL subjects can be classified as language enthusiasts and their passion for language gives them motivation to aim high and master the language to meet the standards set for students of English as a foreign language at university level. To illustrate their progression in language proficiency, the subjects were asked to self-assess<sup>2</sup>

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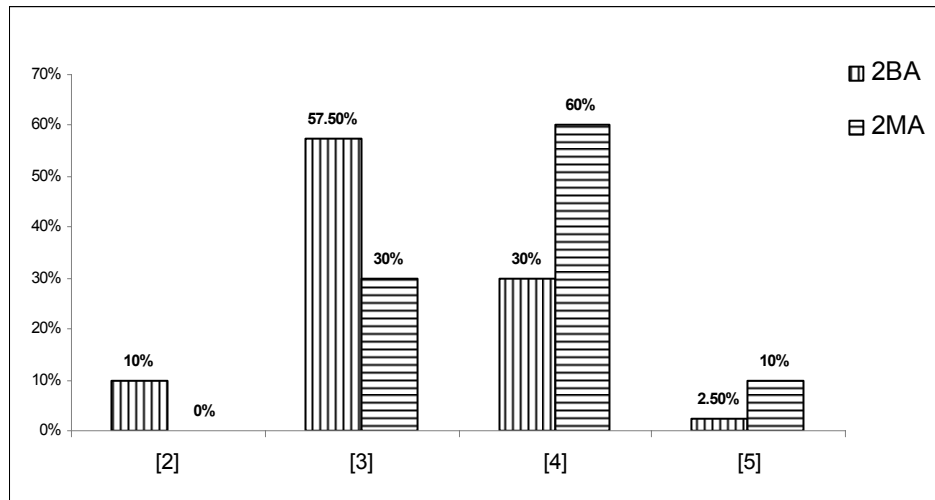
<sup>2</sup> Self-assessment of language proficiency is frequently used in psycholinguistic studies, although its validity as an objective measure of proficiency is questionable especially when it comes to replicating research (chapter 2).

their proficiency in English using a scale of 1 to 5. There were significant differences in the subjects' self-assessment. In the 2MA group the most frequent rating was 4 (67.5%) whereas in the 2BA group 3 was marked by 50% of the students



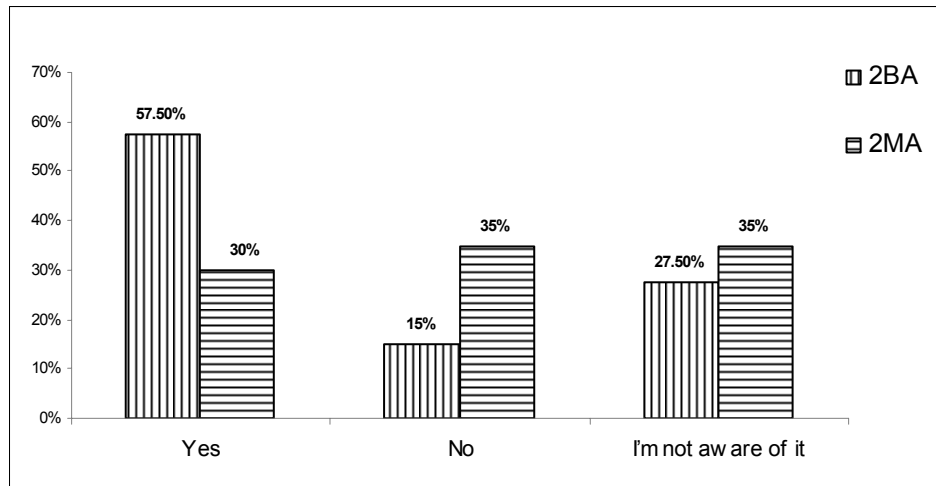
Graph 10. L2 proficiency self-rating for the 2BA and 2MA groups.

The graph above demonstrates that the EFL students are able to self-assess their language skills, and most likely their self-assessment shows high awareness of their English. This ability is in fact metalinguistic in nature as it shows that L2 learners at university level are able to reflect on their language skills and evaluate their level of proficiency. As suggested in chapter five, this is a feature of expert learners who develop their self-confidence on the basis of a sound evaluation of their abilities. It is therefore possible that L2 teaching pedagogies and Translation training pedagogies have a lot in common (Colina 2003b) if they view the learning process from the perspective of an expert learner. What is more, both groups of subjects were then asked to evaluate their particular language skills. In both groups the subjects assessed their receptive skills, reading and listening higher than their productive skills, speaking and writing. As for the fifth skill, translating the results of both groups differed slightly. While for the 2BA group 3 was chosen by the majority, in the 2MA group 4 was chosen by the majority of respondents.



Graph 11. Translation proficiency self-rating for the 2BA and 2MA group.

A closer correlation between the results in graph 10 and 11 yields some interesting results. On the one hand, the results allow the assumption that the increase in L2 proficiency has a positive effect on the subjects' self-assessment of their translation skill. On the other hand, there is a discrepancy between a positive growth in L2 proficiency rating for the 2MA group and the clear drop in translation proficiency self-assessment looking at the rating at 3 (5% for L2 proficiency and 30% for translation proficiency) and 5 with 27.5% versus 10% for translation proficiency. This result may indicate the growing awareness of other cognitive skills which are important for translation apart from L2 proficiency. To use González Davies's (2004) ideas it might indicate that the 2MA students have progressed to the stage of conscious competence in their translation skill whereas the 2BA students might still be at the stage of conscious incompetence. What seems significant, there is a similar tendency in the subjects' self-assessment of feeling in control of their L2 when using it for speaking and/or writing (see Wyatt 2009b). When asked whether they have to put conscious effort into controlling what they say when they speak/write in English, the majority of the 2BA group said 'yes' whereas in the 2MA group the majority was either unaware of it or said 'no'.



Graph 12. The L2 control factor for the 2BA and 2MA group.

This result shows a shift from consciously controlled language processing, which in itself takes a lot of time and attention, to the lesser need to consciously control language processing reported by the 2MA group. Such progression is consonant with the cognitive theories of L2 learning (Mitchell and Myles 1998) according to which learning a foreign language leads from initial awareness, through active manipulation to controlled processing, and finally and ideally towards automatic processing<sup>3</sup>. The issue of language control was discussed in chapter two (see also Gile 1995/2009, De Groot and Christoffels 2006) and its relevance for the development of translation as a human skill was elaborated in chapter five. However, in the context of the evolution of translation as a human skill and its role in mental effort management during the translation process it still requires a more detailed investigation. For the time being it is important to notice that in both groups, 2BA and 2MA the highest rating (5) for translation proficiency was rarely marked, only by 2.5% of the 2BA subjects and by 10% of the 2MA subjects, although the 2MA group did not report a high need to consciously control their L2. This result shows that the students are aware of the need to improve their translation skill which clearly is not developing parallel to their L2 proficiency.

<sup>3</sup> See Paradis (2009) on the illusion of automatic processing in speeded up native-like language performance and a different view by Kroll and Linc (2007).



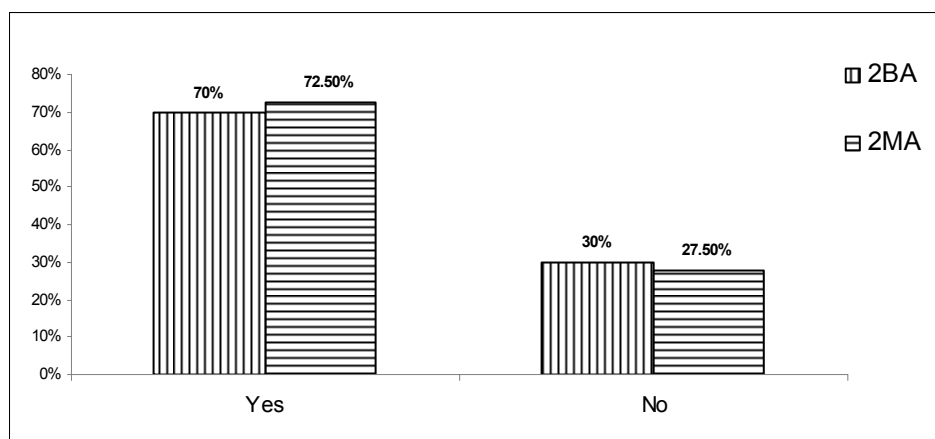
The above correlated results including L2 proficiency, translation proficiency and language control confirm Kiraly's (1995) claim that at some point of translation skill development the majority of students are unlikely to further their translation skills by practicing translation on their own, without corrective feedback and without guidance. Although as pointed out in chapter five it is not impossible if one takes an expert learner perspective. As suggested in chapter four the issue of translator training is very complex and in need of more transparent methodologies. Interestingly, a clear majority of the 1BA students (96%) said that in their opinion excellent knowledge of English is not enough to become a professional translator and 73% declared that other skills are also important. As many as 60 out of 80 1BA subjects (75%) were convinced that it is necessary to take up special training to become a professional translator. The feeling of the need for training to become a professional translator in the case of the 1BA subjects can also be the result of their experience in translating a text for somebody else (reported by as many as 87.5% of the 1BA subjects).

Following Malakoff and Hakuta's (1991) call for more research into the role of metalinguistic knowledge as far as translation proficiency is concerned, further questions aimed at assessing the students' metalinguistic awareness as an important factor in the development of translation as a human skill. The results show progression in this aspect. Although both groups showed similar results when asked whether they notice that they make mistakes when performing in their L2 ('yes' marked by 50% for the 2BA and 57.5% for the 2MA group), there was a significant difference when responding to the question, 'Do you consciously self-monitor yourself when you speak/write in English?' The 2MA group in the majority of 30 out of 40 students (75%) said 'yes' whereas in the 2BA group although the majority said yes, 10 subjects added 'I try, sometimes, not always' showing that with lower language proficiency and less control over the L2 system, there is possibly not enough mental resources to monitor L2 performance. Also the metalinguistic ability to provide on-line monitoring of the ongoing performance is less available to the 2BA group possibly due to limited L2 practice, as compared with the 2MA group richer by three years of intensive language practice.

The discussion of bilingual knowledge in the research subjects so far has been very much L2 dominant. In this aspect it reflects L2 teaching pedagogies which, as mentioned in chapter four, have frequently ignored the fact that L2 learners are L1 users (Cook 2001). Most foreign language teaching

is thus monolingual and L1 is vastly marginalized and vilified for negative transfer and interference at all levels from phonology to discourse (Odlin 1989, Kecskes and Papp 2000). When however we discuss the bilingual foundations of translation skill both languages have to be granted a legitimate place in the mind of L2 users. They are both needed and important. The learners are taught to suppress L1 interference, or at least to control it in their language performance. Are EFL learners at university level aware of language interference? When asked, 'Do you feel that Polish words interfere when you speak or write in English?' the two groups differed in their answers: the 2MA group seemed to have been much more in control of interference. No subjects said yes, 30% opted for sometimes, 42.5% said rarely and 27.5% said no. With the 2BA group 7.5% said yes, 45% sometimes, 35% rarely and 12.5% no.

These answers point to the growing capacity for language control (see Green 1993) including control over L1 interference. This ability to keep the two languages apart is a positive change vital for the evolution of translation as a human skill. When two languages meet so close in translation the likelihood of language interference increases, and for translators the control of interference becomes a must (Nord 2005: 133). The awareness of cross-linguistic influence (or interference) between the two language systems and being vigilant to overcome it is a part of metalinguistic ability. This part of knowledge structures allows one to look at language as a tool, to assess one's success or failure in using it to achieve an intended aim, whether the aim is speaking, writing or translating. Interestingly, both groups of EFL students admitted that translating made them more concerned about their L1, which in other words means that they became aware of their L2 impact on their L1, or the L2 dominance over their L1. From the 2MA group as many as 72.5% admitted that translating made them more concerned about their Polish, from the 2BA group 70% students were of the same opinion.



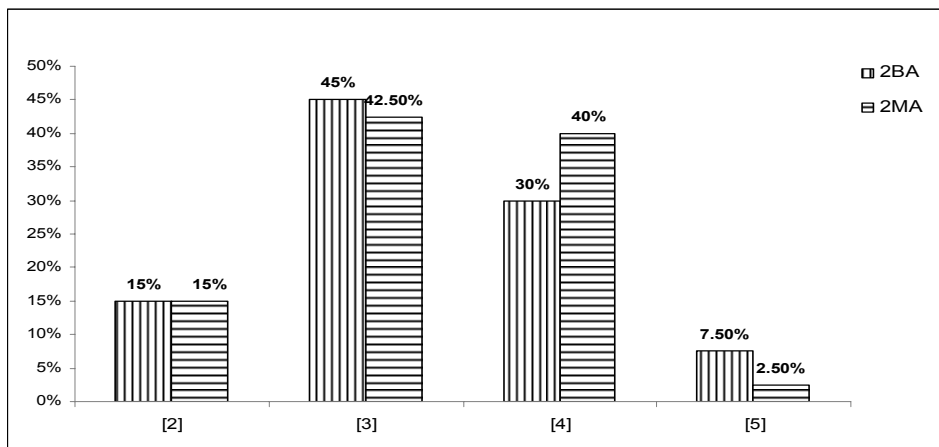
Graph 13. Growing concern about the EFL students' L1 as a result of translation experience.

It is possible that these feelings are due to the English dominant language mode that students are in throughout their studies, especially as far as writing is concerned. Dominant exposure to English in their receptive and productive language skills is bound to affect the speed of lexical access (see Levelt 2001, Kroll and Sholl 1992, Kroll and Linc 2007) from their Polish word store, as well as create uncertainty about correctness and appropriateness when translating. This can be explained by the different “location” of the L1 knowledge (procedural) and the L2 knowledge (frequently declarative) in the LTM. Getting used to the different location affecting routes of lexical access possibly comes with translating experience, and as it was suggested in chapter five, is related to the ability to integrate knowledge into a KIN for the purpose of translation. In view of the above data it seems sensible to conclude that the first step in translation skill development is restoring a proper balance between the EFL students' both languages which is not a matter of a quick and easy push-the-button change.

The emerging picture of bilingual foundations illustrated by the results of the questionnaire study shows that they are still in the making. The subjects are able to show their awareness of current problems and concerns referring to their L2 proficiency and language imbalance. When answering a question, ‘When you speak or write in English what is your priority?’ The majority of subjects in both groups (87.5% in the 2MA group and 75% in

the 2BA group) chose 'content' over 'correct grammar' (30% in the 2MA group and 32.5% in the 2BA group) and 'appropriate vocabulary usage' (55% and 42.5% respectively). What might seem interesting, as many as 27.5% of the 2MA subjects and 15% of the 2BA subjects marked all three aspects as equally important. These data show that in some EFL students there is a growing awareness that everything is important in the overall language performance and that one cannot convey good content without correct grammar and with inappropriate vocabulary use.

So far the analysis of bilingual foundations which are being laid to make the development of translation expertise possible has indicated its complex developmental nature as well as the growing metalinguistic awareness in EFL students. Do their developing language skills give them enough confidence to translate? Do they feel confident when using their bilingual knowledge when they are asked to translate a text? Both groups were asked precisely this question to see if being divided by three years of intensive language learning the 2MA students would feel more confident when translating than the 2BA group. The results show that there is not much difference in rating self-confidence when translating. When asked to mark their level of confidence on a 1 to 5 scale, in both groups the most popular rating was 3, otherwise the distribution was very similar.

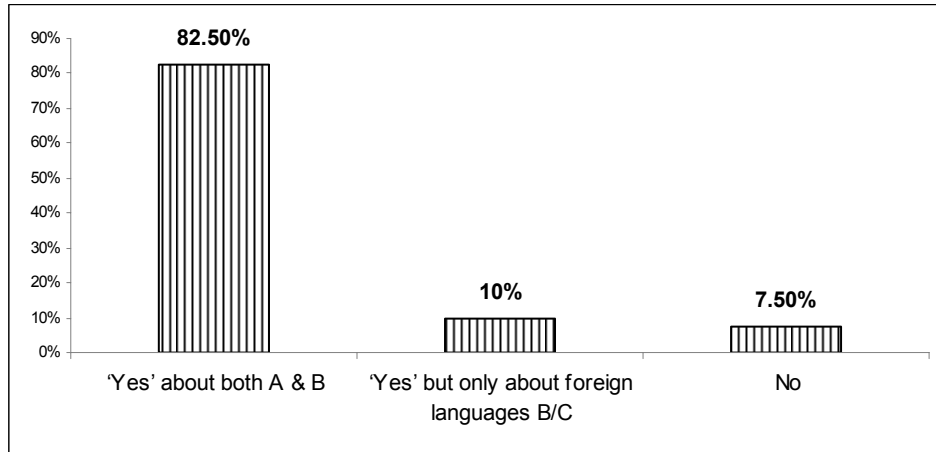


Graph 14. Self-confidence in translation tasks for the 2BA and 2MA groups.

The similarity of the results confirms that despite the tremendous difference in L2 proficiency which exists between 2BA students and 2MA students, the 2MA subjects did not seem more confident when translating. This again confirms that some major qualitative changes have to take place to further their translation skills and give them more confidence when translating.

The above results are significant as they confirm that translation as a human skill is built on bilingual foundations but it involves something qualitatively and quantitatively more than communicative competence in two languages. The issue of communicative confidence hinges upon communicative competence but includes other social and cognitive skills. It remains to be seen that the confidence needed to translate can be built up during translator training courses, or alternatively it will evolve as a product of translation practice combined with expert learner self-assessment and corrective feedback. Another tentative conclusion from the EFL students' L2 acquisition history and their honest self-assessment of the skills they feel they possess is that learning a foreign language is a lifelong process open to further development if one is interested in high level of attainment, or native-like L2 proficiency. What is more, it seems that the more we know about our L2 the more humble we feel as L2 users who come to experience the entire complexity of the L2. This awareness stimulates further efforts on the part of an expert learner who is aware of his/her abilities and deficiencies, which have to be overcome to progress further in L2 proficiency. This observation is confirmed in the questionnaires filled out by professional translators.

When asked, 'Do you feel you constantly learn more about your languages when you translate?' as many as 82.5% translators chose 'yes about both A & B' and only 3 translators out of 40 chose 'no', while 4 opted for 'yes but only about my foreign languages B & C'.



Graph 15. Translators as constant language learners.

These results show that not only the question of ultimate attainment in L2 is open to discussion (Kroll and Linc 2007, Paradis 2009) but also our L1 is subject to improvement throughout our life (cf. Cook 2003). The fact that translators feel they constantly learn more about their working languages, both A and B shows how open the process of linguistic development is. Their answers confirm that our assumption that being native speakers of our L1 we know the language very well is in itself imprecise. There are obviously words that we do not know, and a variety of registers some of which although in our native language might in fact be equally alien as if they were in a language totally foreign to us. Another issue is the subjectivity of our L1 knowledge which we are frequently unaware of, and which does not have to agree with the public and socially shared expectations imposed on language use. It is possible that translators in the process of developing their professional translation skill learn to objectify their L1 use, becoming at the same time aware of language as social practice which has to comply with socially accepted norms and standards (Toury 1995, Hermans 1991). The ongoing process of self-improvement in L1 as a result of translation practice is frequently overlooked in discussions of translation proficiency. Similar scant attention has been granted to the need to maintain balance between one's L1 and L2 through awareness of cross-linguistic influence between the translator's both working languages, and the need for efficient control mechanisms. Yet, as demonstrated by the above results and hypothesized in

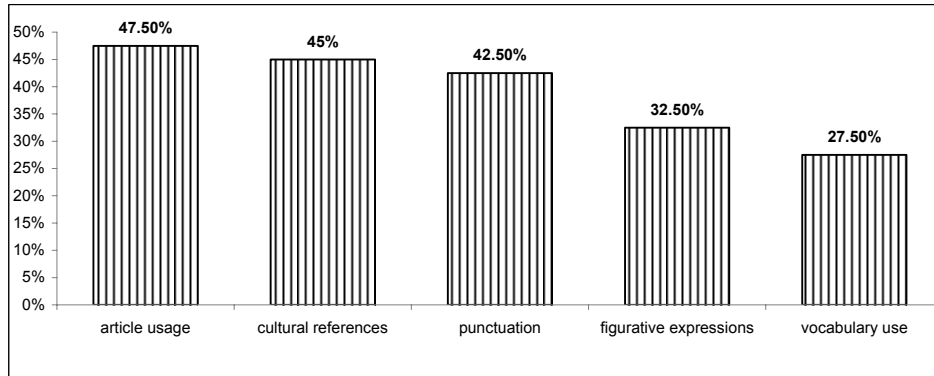
chapter five, a translator as an expert learner is very much aware of the need to integrate all the knowledge needed to translate and through self-reflection will become aware of the inadequacies in both L1 and L2. Some comments left by practicing translators as advice for prospective translators sum up the main points:

- A good translator does not only polish the foreign language but constantly works on his/her native language. It is always more difficult to translate from language B to language A since we tend to think that as native speakers of Polish we know everything there is about our mother tongue but in most (translation) cases it is not so.
- Admire languages for their richness and originality, love your own language first (know it well).

Problems with L1 usage in translation have not received adequate attention, and it is the deficits in L2 usage which usually come to attention in translation criticism. When asked, ‘Which aspects of the foreign language are still problematic for you?’ most of the subjects chose at least one aspect from the list including:

- a) cultural references
- b) article usage
- c) figurative expressions
- d) sentence structure
- e) tenses
- f) recognizing and reproducing register
- g) punctuation
- h) vocabulary use

Problems with article usage were marked most frequently (19 translators) followed by ‘cultural references’ (18 translators) and punctuation (17 translators). Figurative expressions were problematic for 13 translators, vocabulary use for 11, the remaining aspects were marked by fewer subjects: 4 marked recognising and reproducing register, 2 marked tenses and sentence structure, 1 subject (a natural bilingual) marked Polish case endings as problematic.



Graph 16. Aspects of the English language marked as most problematic by professional translators.

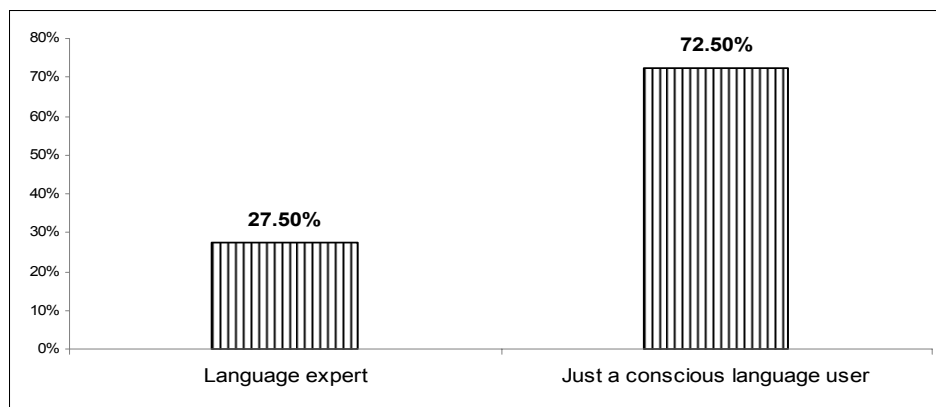
These sincere answers in Graph 16 are probably going to be comforting for the potential translators (EFL students) whose bilingual knowledge has been assessed in this section. They also stimulate possible explanations of the underlying causes. The aspects most frequently causing problems such as cultural references, article usage and punctuation are the most implicit aspects of the English language even for native speakers (see Paradis 2009). The rules of usage are not explicit and therefore difficult to teach as part of metalinguistic knowledge. Frequently, they are very much context dependent and defy logical explanation acceptable for L2 users. It can be expected that since translators are conscious of their weaknesses they become more vigilant about these aspects of L2 usage and treat them with limited confidence. The awareness of one's weaknesses might encourage translators to put a metalinguistic tag on these aspects which they consider problematic. This brings about double checking and making sure that the doubts are cleared at the revision stage.

Although the fact that translators remain for ever keen language learners has been mentioned in TS literature, not much research has been carried out into how translation practice alters bilingual knowledge structures. Yet, the results discussed so far confirm that translators are constant language learners, i.e., expert learners who develop their systems intelligence and professional self-confidence as an outcome of their work and in preparation for future work. Many comments left by practicing translators as advice for beginning translators referred to what can most generally be



termed ‘language maintenance’. Such comments as, ‘read a lot in L2 and L1’, ‘if you think you know a word always double check’, ‘if you think you know a lot you must always know, there is much more to learn’, or ‘be prepared for a lifelong learning process’, are some of the examples referring to the need for language maintenance in practicing translators. Well maintained frequently refreshed knowledge will be more readily available for activation and integration into a Knowledge Integration Network (KIN) needed for a new translation job.

Surprisingly however, the awareness of the need for language maintenance does not mean that translators see themselves as language experts. When asked directly, ‘Do you consider yourself a language expert?’ only 27.55 said ‘yes’ and the majority of 72.5% opted for ‘just a conscious language user’.



Graph 17. Translators as language users or language experts?

It is plausible that the humble self-assessment demonstrated in the graph above reflects years of experience with cross-cultural language transfer. While self-confidence in the use of language is needed to translate, becoming overconfident can prove detrimental to communicatively adequate translation, as it was hinted by one of the questionnaire respondents. To quote, “Be extremely careful with your self-confidence; things rarely are as simple as they seem to be”.

Some other comments included in the section where practicing translators were asked in an open question to give advice to beginning translators offer further explanations of how practicing translators see bilingual

knowledge with reference to their everyday practice. I will quote a few to illustrate the point.

- read a lot of quality press in language B: it has a positive impact on your style in language B, it helps you to sound authentic in it.
- read original works in languages A, B and C; follow cultural, political, economic, etc. events
- read a lot in Polish, be inquisitive about the world
- work professionally in the foreign country using the language as long as possible, with no people around you who use your native language
- be humble
- I have spent many years teaching students what successful translation is all about but in one sentence: The primary requirement is an extremely good knowledge of both source and target language as well as of the cultures to which those languages belong.

These comments left by experienced translators as a kind of their professional testimony for the novices in the profession point to the ongoing language learning process, and to the need for language maintenance as far as both languages A and B (also C) are concerned. They also show the respect with which translators learn to treat language as their tool. It is possible that experience in translation teaches them to be very much aware that if not kept under sufficient control it will take revenge for being ignorant about its lively versatile and playful nature. Translations found on restaurant menus are a good example<sup>4</sup>.

This section focused on the bilingual foundations of translation as a human skill. Looking at the language acquisition history of those who might become translators and those who have experienced the translation process in a structured educational environment, as well as those who provide translation services on the open market has demonstrated the complex dynamic nature of bilingual knowledge which becomes integrated in translation. In the section which follows an attempt is made to see how practicing translators integrate their knowledge when producing translations.

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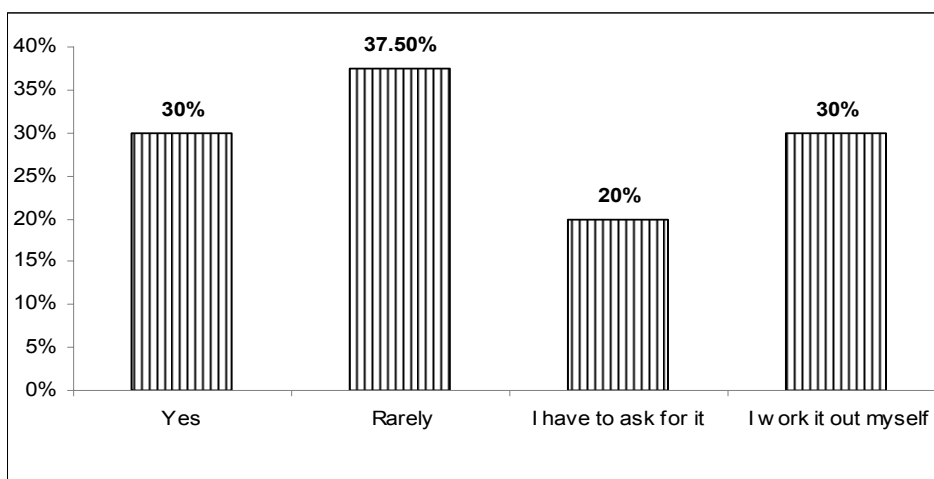
<sup>4</sup> ‘Walleye pollock (*Theragra chalcogramma*) in herb and cream sauce’ for the Polish *mintaj w sosie ziołowo-śmietanowym* mentioned by Kearns (2008: 198) ‘sparkling wine’ instead of ‘sparkling wine’, ‘pizza with edible fungus’ instead of ‘pizza with mushrooms’ (for more examples see Whyatt 2006c).

### 6.2.4. A translating professional at work

In order to illustrate how translators integrate knowledge let us follow an exemplar translator who receives a commission to translate a text from a client until he/she produces the translation and sends it to the client. Using answers provided by practicing translators in the questionnaire and for the sake of clarity, let us divide the work into several stages and fill each stage with information that has been gathered in the study.

Stage 1. A translation is commissioned and arrives by e-mail (today possibly the most probable scenario)

The translator opens the e-mail which probably reads, ‘we attach a text for translation, and we need it by 11 a.m. tomorrow morning’. Is there any so called ‘translator’s brief’ attached as well which will specify who and for what purposes needs the translation? The data collected from the professional translators show that only 30% of the practicing translators receive any kind of translator’s brief, and the majority of these translators are in full employment. It seems that in the majority of translation jobs there is no specific information referring to the purpose and the target audience of the translation. The graph below shows the distribution of answers.



Graph 18. Do translators receive a translation brief?

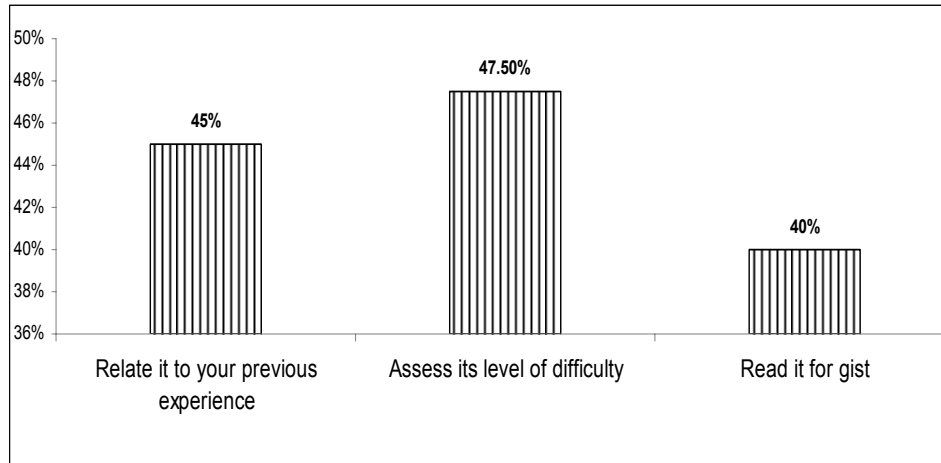
These results also indicate that the translator has in fact an extra responsibility to work out the translator's brief which she/he will probably do relying on experience gathered from cooperation with the clients so far. One can as well say that the translator can always ask for more information about the commissioned job. The issue of cooperation with clients and all the social inter-personal skills which are required need a broader insight, although according to the data gathered in this study only 20% admitted that they would like to improve their cooperation with clients, which shows that the majority of the translators are satisfied with the work relations they have with their clients. At this point in the entire translatorial action (Holz Mänttari 1984) we have come to the translator's first encounter with the SL text.

#### Stage 2. The first encounter with a new text for translation

The exemplar translator is opening the attached text for translation and assessing its size. An inaccessible cascade of thoughts is set in motion in the translating mind while the translator is scanning the SL text (cf. Holmes 1988 and his mind-map theory, also Hönig 1991). What do translators look for during their first encounter with the text? When answering the question, 'When you read (scan) a new text for translation do you first:

- a) relate it to your previous experience (I've done something similar/It's completely new to me)?
- b) assess its level of difficulty?
- c) read it for gist?

the practicing translators varied in their opinions. As many as 18 translators (45%) opted for 'a', 19 (47.5%) for 'b' and 16 (40%) for 'c', four translators said that they actually perform all three tasks at the same time and one translator said, 'I never read it before translating and of course I know if it is new to me or not. But it makes no difference to me'.



Graph 19. The first reading of the SL text.

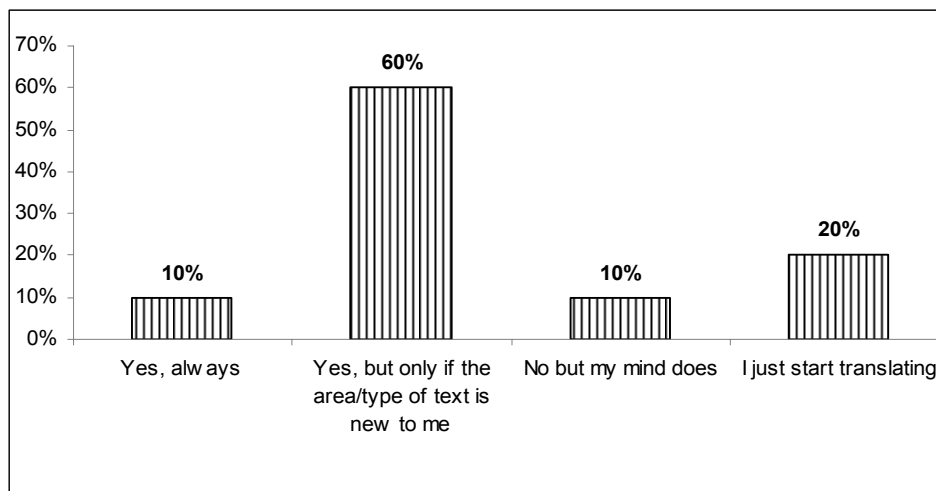
The data in graph 19 show the individual preferences of particular translators. It might seem that only answer 'a', 'I relate it to my previous experience' would confirm the proposal of KIN, but it is plausible that all three activities are performed with KIN as a general framework. Is it possible to assess the level of difficulty of a text we have not seen before without placing it against the background of what in our estimation is perceived as easy or difficult due to our experience? When reading for gist, can we detach ourselves from the cognitive background of our knowledge and experience which allows us to understand it? Doesn't the rule of inferential comprehension rely on integrating our background knowledge that is building a KIN? It is therefore plausible to say that our task oriented exemplar translator sets a relevant KIN in motion with the first scanning of the text to be translated. The Working Memory (WM) is responding to the visual recognition system while the translator is scanning the text (see Bell 1991) and KIN is searching through the Long Term Memory (LTM) archives in order to relate the text to the translator's previous experience, assess its level of difficulty and get the gist of the conceptual content. It is only an initial warm up but its outcome is essential in the form of assumptions and hypotheses about the text (see Pym 2003). At first glance, the exemplar translator knows for example that: a) I have done something similar before, b) the text is fairly easy, c) it is an advert of the local airport. Or: a) I have not done anything like this before, b) it is easy/difficult, c) an instruction manual for a woodworking machine. Of course, other combinations of factors are

possible. To sum up, during the first encounter with a text for translation, the mind starts to prepare itself for the task with spreading activation and the parallel processing of information from the SL text and from the translator's long term memory. The next question is, 'Are translators aware that they prepare themselves for translation, or do they simply start translating?'

### Stage 3. Preparation

As suggested in chapter five KIN is hypothesised to operate implicitly and explicitly, it can be either purely intuitive and unavailable to introspection or cognitive, consciously engineered and thus subject to introspection. It can as well be a combination of both, intuitive connectionist thinking and analytical deduction (Robinson 1997). In other terms translators can be unaware of it, or fully aware of its cognitive manifestation. The question of what happens before the exemplar translator starts to translate is thus only partially open to inspection. When asked, 'Do you prepare yourself before you start translating a new text?', the respondents were given four options:

- a) yes, always
- b) yes but only if the area/type of text is new to me
- c) no but my mind does
- d) I just start translating

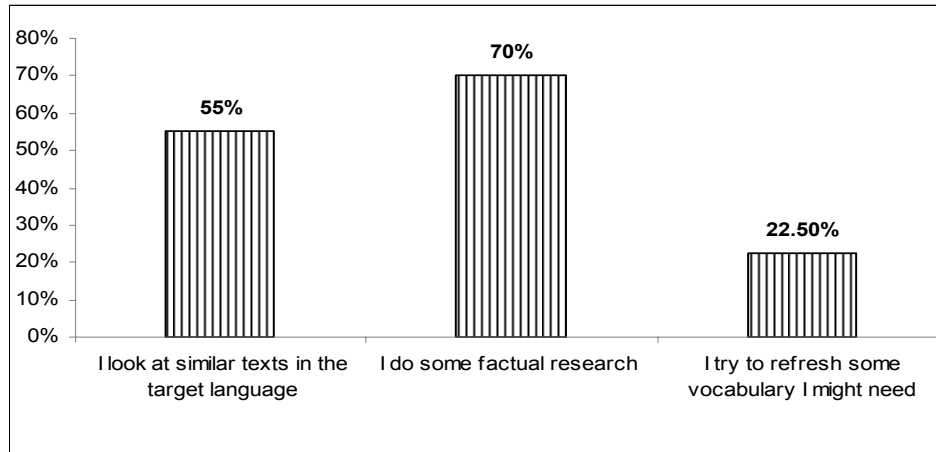


Graph 20. Do translators prepare themselves for translation?

It is interesting to note that those translators who said that they start translating without devoting any time for preparation were in fact very experienced and they have been providing translation services for 9 to 35 years. This is in fact an interesting result. Apart from pointing to idiosyncratic differences, it might also suggest that with experience KIN is more intuitive, implicit and when it is needed explicitly it surfaces as the translator progresses with his/her translation. Any knowledge which is unavailable in the translator's LTM has to be accessed externally. In other words, if the private memory does not hold the needed information, the public, external or social memory is consulted (Donald 2001). However, as the graph indicates the majority of translators prepare themselves before they start translating if the text is new to them showing their awareness that an adequate KIN has not been satisfactorily created in their mind. 'What do translators do to prepare themselves before they start translating?' The translators had three choices, and they could mark as many as they felt appropriate in their case:

- a) I look at similar texts in the target language
- b) I do some factual research
- c) I try to refresh some vocabulary I might need

The answers provided by the practicing translators point to some directions. The majority of 28 translators marked 'b' admitting that they do some factual research before they start translating, 22 said that they look at similar texts in the target language and only 9 said that they try to refresh some vocabulary they might need. As many as nine translators marked all the options. The results demonstrated in the graph below show that a KIN is frequently created with the use of external resources.



Graph 21. The pre-translation preparatory stage.

Doing some factual research aims at the acquisition of new knowledge, or refreshing the translator's background knowledge which has not been accessed for some time (facts, specific information, data, etc.) but which is necessary to produce a professionally adequate translation. Yet, the search itself is intrinsically connected with acquiring or refreshing verbal means (terminology either absent in the translator's mental lexicon or dormant due to low recency and frequency of use) in which this knowledge is expressed (see chapter two and five). Although clearly the lexical activation gain seems secondary in the translator's estimation presented in the graph, as predicted by the mental lexicon research conceptual activation will spread to the lexical level and therefore its effect can be expected to be positively facilitating for the speed and fluency of lexical access which will take place in the process of translation. Furthermore, although there was no indication of the language in which the factual research was carried out it is very possible that it was done in the target language of the translation at hand. The fact that as many as 22 translators marked 'a' admitting that they looked at similar texts in the target language before they started to translate shows that they felt the need to gather some more relevant information on text type specification, discourse patterns, terminology, level of formality, or any other clues which they can follow producing their translation. It is also possible that the role of KIN when the translator is looking at parallel texts is in fact multilayered and performs a



conceptual and lexical warm up in the internal memory of the translator who prepares his/her workbench gathering all the necessary tools and materials, refreshing needed algorithms and patterns. Looking at parallel texts the translator is also performing a language switch. Having read the SL text for translation the translator reaches into the TL repertoire preparing himself/herself for the lexical access process which will be running, perhaps more efficiently when the translation process is set in motion. One translator working for the EU said, 'when I go to interpret about fisheries I think of fish, and all the fish business and the words which I need when I do my job just come to my mind'<sup>5</sup>. The subjects in this study seemed to produce the same memory activation effect. It is significant that some translators marked all three options as valid in their case. In fact all three ways of activating memory are essential components of an adequate KIN. They stimulate one another and feed on each other with their joint purpose to activate the translator's LTM and prepare the ground for smooth cooperation between the working memory and the long term memory archives. In the process of translating a text the working memory will be calling for specific conceptual content and its adequate verbal cladding in the TL (see Bell 1991 on the central executive and slave systems of human memory). A comment left by one of the respondents points again to the stimulating effect of the preparation stage. When answering the question, 'What do you do to prepare yourself for translation?' the translator said, 'Yes, to all three. My biggest problem is 'b' which I usually find more interesting than the actual translation'.

This shows that the intellectual curiosity required for translation is stimulating and involves the perks of the job in the form of acquiring more knowledge, quite often in areas which are outside everyday experiences. The need to do research and acquire needed knowledge is appreciated by the translators (see graph 8) and frequently underestimated by clients. The need to do research when preparing for written or oral translation in the case of interpreters is a part of translation as a profession, although it obviously takes different forms and has different requirements depending on the modality in which the translation is performed. In both cases research prior to translating helps to build an adequate KIN and is bound to create affectively a positive attitude by removing the feeling of

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<sup>5</sup> Maciej Machniewski – presentation on the EU translation services given at A. Mickiewicz University, Poznań 2009.

being in an unknown domain. Again together with factual knowledge we gain the verbal means to express it, to analyze it and to pass it on to our potential readers. To sum up, the preparation stage is an explicit manifestation of KIN which shows that translators need to feel that they have activated and integrated enough knowledge structures for the process of translation to physically begin. While the majority of translators perform this task prior to the onset of translation, others prefer to have it as if running on-line and they claim that they do not devote any time for explicit pre-translation preparation. Some, however are aware that although they do not literally prepare themselves their mind nevertheless does prepare itself for the task ahead. Following these considerations, it seems justified to expect that the process of translation will be smoother, perhaps faster and more satisfactory in the translator's opinion.

What might seem interesting, as many as 70% of the translators said that they feel that the process of translation is slow to start with and then speeds up. The clear minority said that they were not aware of it (15%) and the remaining 15% said that they did not think that the process of translation is slower at the beginning. What is significant here is the fact that 5 out of 6 translators who said that they did not feel that the process of translation is initially slower admitted that they did not devote any time for explicit preparation before they started to translate a new text. Two out of the 6 translators who were not aware of the different speed of their translation process also did not do any research before they embarked on the translation task. Still, it would be premature to claim that there is a close correlation between devoting some time for explicit knowledge integration (KIN) and the efficiency of translating. On the other hand, translation as a creative task does not have to differ with reference to an initial slow pace from other creative tasks, like for example creative writing. Even in creative writing some warm up techniques are frequently used to put oneself 'in the right frame of mind'. In translation which involves language switch such warm up might be even more productive and could suggest the facilitating effect of KIN on the translation process. This claim however requires a more controlled experimental validation. In the present analysis of the translating individual at work, we have come to the next stage, writing down the translated text.

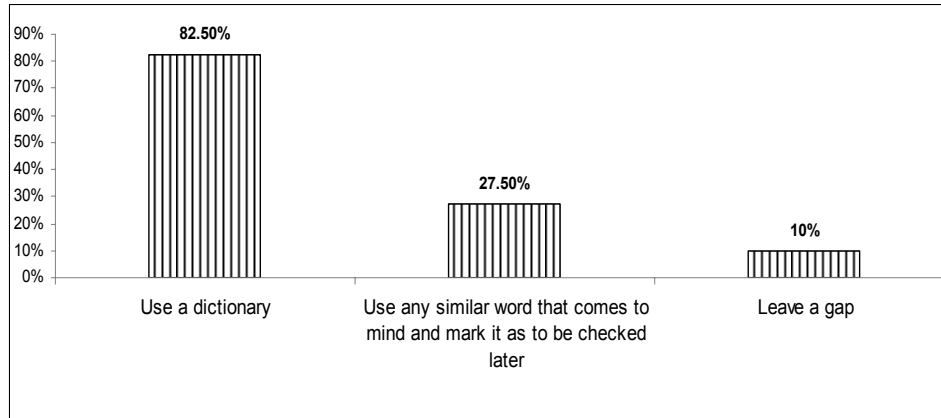
#### Stage 4. Writing down the translation

As mentioned before the difficulty in analysing the translation process lies in its hidden nature, in the metaphorical ‘black box’ which makes all the attempts mere speculations and approximations. The analysis which follows here does not make any claims to be better in its epistemological limitations. The only and essential difference here is that the voice is given to practicing translators who will speak from their experience. In a set of questions prepared for the PT group I tried also to tap into the procedures which the translators apply when writing down the translation. I assumed that the process of translating and writing down the translation will run parallel, and that the problems with smooth transfer will be manifested by disruptions in the writing/typing process, or to be more precise in the typing of the emerging TL text. My questions referred to how translators deal with the disruptions to the smooth flow of the typing process. Relying on my own experience as a freelance translator and a teacher of translation courses I asked how translators deal with the problems of lexical retrieval (e.g., either due to memory blocks or lack of needed lexical items in their own mental lexicon) that are known to be experienced by translators (cf. Rose 1991). I wanted to analyse their behaviour when uncertain about how to solve problems and gain insight into the tools they use in the process.

Problems with recall or retrieval of the desired lexical means are a part of the translation process, and are very well documented by TAP studies (see chapter five). I asked my respondents, ‘When you can’t recall a word that you need when translating do you?’

- a) use a dictionary
- b) use any similar word that comes to your mind and mark it as to be checked later
- c) leave a gap

Graph 22 below shows that as many as 82.5% of the translators said that they use a dictionary when having problems with recalling a word they need, 27.5% opted for using any similar word that comes to their mind and marking it as to be checked later. Only 10% would leave a gap and 2 translators said that they resorted to all three procedures depending on the task at hand.

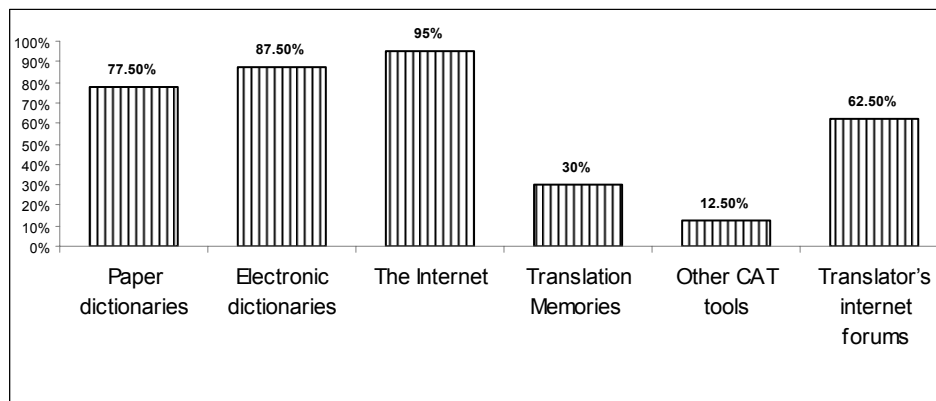


Graph 22. Coping with retrieval problems during the translation process.

Interestingly, 20% of the PT subjects admitted that they consciously postponed using a dictionary, possibly until the revision stage. These translators seem to rely on their internal bilingual lexicon to start with, and possibly in this way they can develop a steady tempo of translating. Although the clear majority uses dictionaries even during the first draft, the 20% of those translators who do not do so show the individual preferences among translators in their favoured procedures during the translation process. Contrary to my expectations, there is no clear correlation between the number of years in the profession and the tendency to delay dictionary use, as among those who delayed using a dictionary there were translators who have been in the profession for 8 up to 30+ years. This finding confirms Fraser's (1999: 26) suggestions that for an efficient translation process professional translators most likely combine the use of dictionaries with what she calls 'intelligent guessing'. Fraser (1999: 32) having studied 21 professional translators concluded that learning to 'release words' from memory is essential for self-sufficient translators, where self-sufficiency means also knowing the limits of one's internal mental resources.

The question of tools in the translation process is vital to take into account as it participates in the process, and is essential for the speed of the process and for the quality of the final product. The ability to use tools was taken as a separate subcompetence in the componential model of translation competence (PACTE 2003 see chapter 4). More so with the development of

IT, skilled use of available tools, including electronic dictionaries, the Internet, data bases and CAT tools has gained a broader perspective. As predicted by Wilss (1999: 231) the ‘data highway’ creates the need for a new skill of being able to know how to effectively and efficiently search for the needed knowledge, and how to cope with the information overload. I asked my respondents which tools they use in their everyday practice. The results demonstrated in graph 23 below show which external memory tools are used by the translators analysed in this study.

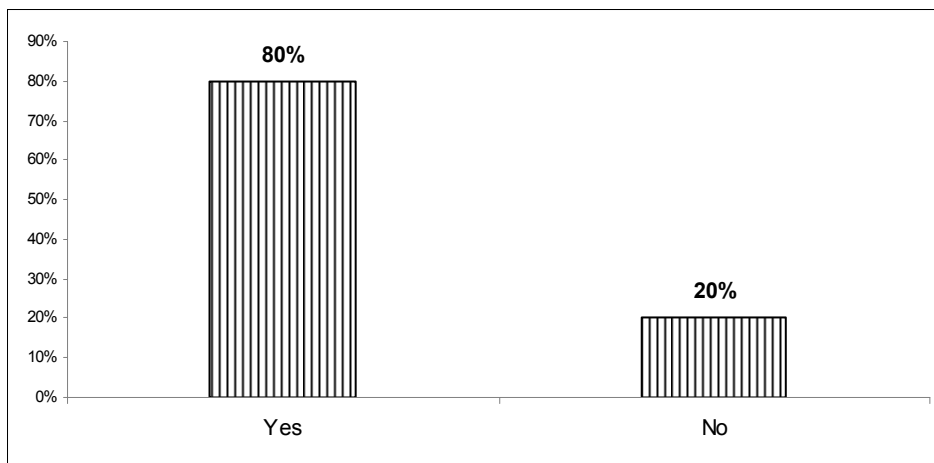


Graph 23. The external memory tools used by translators.

The Internet is used by 95%, e-dictionaries by 87.5%, paper dictionaries are still used by as many as 77.5%. Apart from the three major tools, 62.5% use translator's internet forums, but only 30% use translation memories and only 12.5% use other CAT tools. The Internet is also used by the majority of the translators when in need of factual knowledge. As many as 37 out of 40 translators use the Internet when lacking domain specific knowledge whereas 23 out of 40 use experts. Although 49 out of 50 questions were closed multiple choice questions many respondents included some comments. Here some practicing translators said that experts are used very rarely now, but previously they were consulted very often. One translator said that the primary source of factual information is ‘my own vast library’. Although there is not much recent empirical data on the use of translation tools, it is obvious that the electronic turn has resulted in rapid changes. Kuliniak (2009) in her project on the use of dictionaries by EFL students during a translation task which was monitored by Camtasia software (the screen spy) reported that the Google search engine is used more frequently

than electronic dictionaries for purely language specific queries. The EFL students who were the subjects in Kuliniak's (2009) study demonstrated the time consuming aspect of the inefficient use of the tools discussed in chapter five and the enormous popularity of Google as a language concordancer used to look for language specific information with the frequently mentioned rule, 'If you don't know it, google it'. The results gathered from practicing translators confirm that on-line access to information both factual and language specific is an essential part of the translation process for professional translators. It is important to remember however that the external aids and tools are helpful if used under adequate metacognitive supervision, which as hypothesized in chapter five relies on the ability to build relevant knowledge integration networks (KIN). Although dictionaries and the Internet help the translator, the multilayered information processing (including language processing) is conducted in its entirety in the translating mind.

Other questions arise. Are translators aware of the temporary imperfections in the way they render the meaning expressed in the SL text when typing their TL version? Do they aim at finding the best possible solutions straightaway, or do they know from their experience that it is important to keep the interlingual communication going between the SL text, its content comprehended by their mind and the emerging TL text? The question, 'Do you mark stretches you are not happy with for further revisions?' aimed at eliciting some information in this respect and gave a 'yes' or 'no' option.



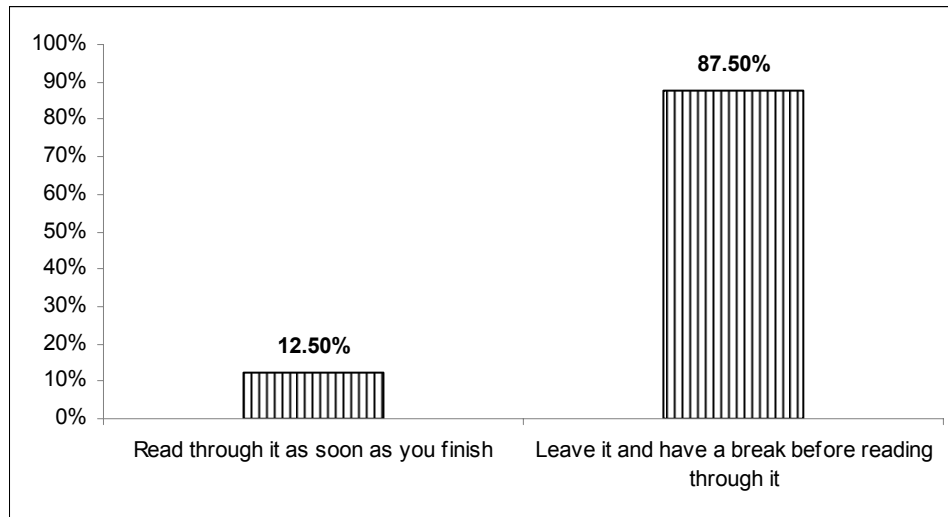
Graph 24. Marking stretches of the translated text for further revision.

Asking such a question was aimed at eliciting data which could confirm that the 'self-monitoring device' is constantly switched on during the translation process, and whatever comes into existence in the TL text is immediately screened by the translator's internal quality control running under the meta-cognitive supervision based on the KIN, which is dynamically readjusted throughout the task. As suggested in chapter five this self-assessment of the emerging outcome demonstrates that there is a close integration between the conceptual base and linguistic knowledge of both languages as systems, pragmatic knowledge of both languages as social practice and the meta-linguistic knowledge, which assesses the produced language in terms of correctness, communicative quality and appropriateness. The answers provided showed that as many as 80% of the practicing translators marked stretches of the TL text they were now happy with. This of course confirms the multitasking which takes place during translation, but above all it confirms the on-line networking in the translating mind which constantly integrates knowledge (linguistic, metalinguistic, pragmatic, conceptual) in order to fulfil the task.

Another question asked whether in case of not knowing which word to choose translators leave other options in brackets for further revision. The whole group was equally divided between those who do and those who do not, showing again that the way translators carry out some procedures is highly individual, and possibly in agreement with their personality dictating one's favourite way of doing things. Yet, personality research has not been sufficiently applied in Translation Studies (see Henderson 1987, Schweda-Nicholson 2005) and it is possible that it will be able to provide a significant explanation of translation aptitude and prospects for a successful career in translation. Leaving the research area open to future investigation, let us follow the translator into the stage when the first draft is finished and undergoes further revision.

#### Stage 5. Revision

As pointed out in chapter five the question of revision is complex and includes different procedures reflecting the different cognitive styles of translators. Graph 25 confirms the common assumption that it is better to leave a translation aside before revising it in order to look at it with a fresh eye some time later.



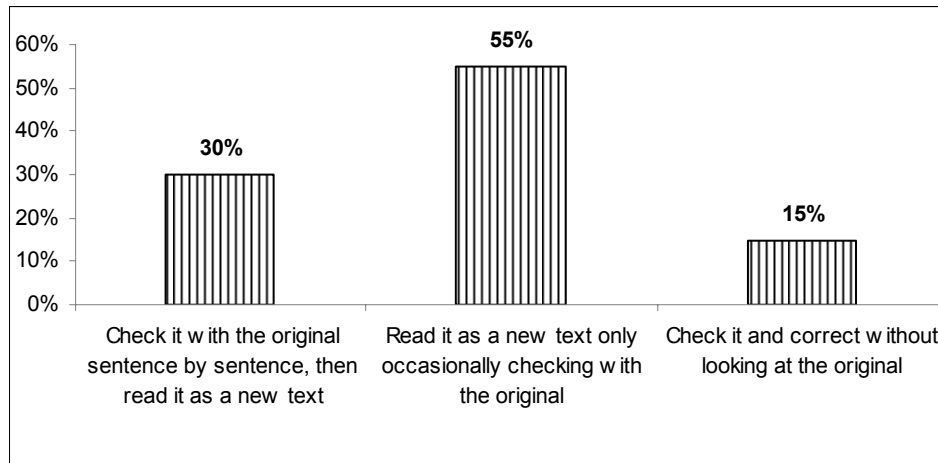
Graph 25. Preferences for immediate or postponed revision among practicing translators.

The majority of 87.5% prefer to leave the translation aside after the first draft is ready. Some translators left comments like, time permitting, if possible, it depends on the deadline, unless it's a very tight deadline. Three translators said that they do both run through it as soon as they finish and leave it for further revision. The vastly preferred approach is letting some time pass before revising the translation. This most likely indicates something significant about the translation process from the point of the translator who has been so much engrossed in it that he/she becomes, on the one hand, mentally and perhaps also physically tired of the high concentration required by the language switch and the need to integrate knowledge all the time (KIN). More importantly however, it is possible that at this stage the experienced translator feels internally convinced that the valid so far frame of mind (KIN) has to be re-set for the revision process to be productive in terms of catching out mistakes of various degree, both incidental, minor and major. In other words, the mind has to be re-framed to carry out the task of revising efficiently in order to guarantee the intended high standard professional translation. How translators revise their texts or what they actually do is the next question to ask. The question, 'When you revise your first draft do you?' gave three options:



- a) check it with the original sentence by sentence, then read it as a new text
- b) read it as a new text only occasionally checking with the original
- c) check it and correct without looking at the original

The answers provided by the respondents showed individual differences in the favoured procedures chosen by translators during the stage of post-drafting revision. The majority of 55% chose 'b', 30% went for 'a' and the remaining 15% marked 'c'.



Graph 26. Revision procedures applied by professional translators.

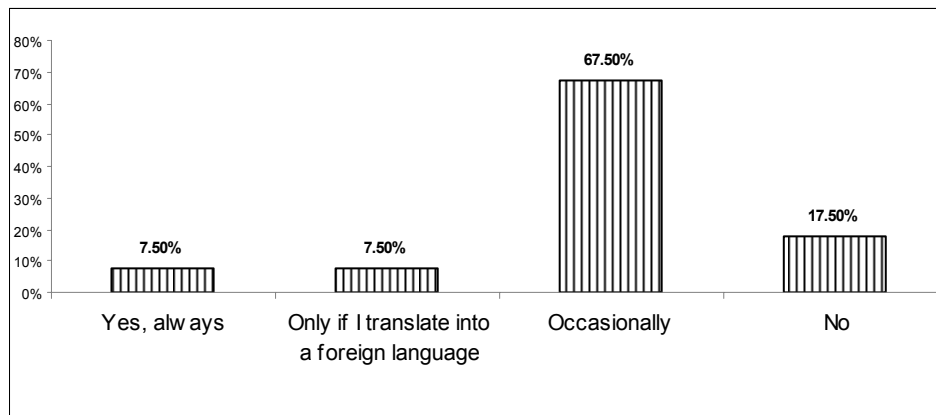
The results demonstrated in graph 26 are significant as they show the point of detachment from the SL text during the revision stage, detachment which is essential and necessary in the view of translation as a functional purpose oriented activity. As discussed in chapter five the problems with detachment from the SL text are common for novice inexperienced translators. The fact that the majority of translators analysed here said that during their first revision they read the TL text as a new text, and only occasionally check it with the SL text shows that they have reached the level of self-confidence which does not make them feel the need to check the new text sentence by sentence with the original, although still as many as 30% of the respondents check their translation for meaning by a close sentence by sentence comparison of the SL text and its TL representative. Since for the majority of the practicing translators studied here revision is

marked by a complete or partial (55%+15%=70%) physical detachment from the SL text some questions arise. Is the ability to abandon the SL text only the matter of self-trust stemming from experience? Does it mean that the abandonment is conscious and done to free the translating mind from the SL text frame and the SL as a system of communication? Is it possible that the translator with experience becomes aware of his/her capacious working memory which holds the 'mental imprint' of the SL text very fresh while reading the new TL text? Is it a simple rule, 'out of sight out of mind' and the SL text is consulted only if the TL text shows problems while being read by the translator? All these questions remain to be investigated. In terms of the hypothesized KIN, however, it can be tentatively concluded that the preferred time lapse before post-draft revision indicates the need to re-frame the KIN used so far, and locate oneself only within the TL as a system and as a social practice, suppressing at the same time the impact of the SL activation and possible interference (see chapter 2 on language control in a bilingual mind). It seems that the strong need for efficient meta-cognitive control makes the abandonment of the SL text essential. A question arises, whether it is possible to develop the ability to re-frame and look at the translation draft with a fresh eye without the time lapse. Would doing a different cognitive task, like for example solving a mathematical formula, or making a shopping list help the translator to re-frame in a short time to perform an adequate revision? To confirm such speculations experimental research is needed conducted in cooperation with experimental and cognitive psychologists.

Comments left by the translators in the study suggest that most likely the revision stage is rarely a onetime activity but constitutes a process in itself with a series of reading through the TL text, and correcting to maximize the communicative effect it is supposed to have on the reader (see Hansen 2008). Some translators included comments pointing to a series of revisions which they usually perform. These detailed comments show the serial nature of revising carried out by professionals who most likely have developed the ability to self-correct relying on their own internal quality assessment procedures (the inner critic).

The revision stage also has to be considered against the changing working environment of the translator who is less and less a solitary worker, and more and more a member of a network where the responsibility is spread over several people, including apart from the translator, a reviewer and a proof-reader as well as an editor (see Tabakowska 2003).

How frequently translators use other people as revisers or proof-readers was my next question. Graph 27 below shows the distribution of answers.



Graph 27. Involving others in the revision process as editors and proof-readers.

Some translators added that the translation agency they work for takes care of it. One translator who said 'no' explained that it was for economic reasons, though he considered it advisable or even recommendable. These results show growing self-confidence which perhaps does not make translators feel the need to have their work checked before sending it to their clients. It is also possible that they themselves have developed significant skills in self-editing when they can objectively assess the conceptual and formal quality of their translations. These skills then become essential components of their human expertise in translation. Bearing in mind the fact that as many as 72.5% admitted that they translate from their language A into their language B though, there is some room for concern about the quality of translations into the translator's foreign language (Korzeniowska and Kuhlaczak 1994, Korzeniowska 1998, Pokorn 2005).

All the stages analyzed so far take time and in the translating business time is money. The question of time management is the next issue to consider. Since the majority of my subjects were freelance translators and in consequence their own bosses, they are, among other things, responsible for their own time management. It turns out that it is not an easy task and the majority of the practicing translators admitted that they would like to improve their time management skills. When answering the question,

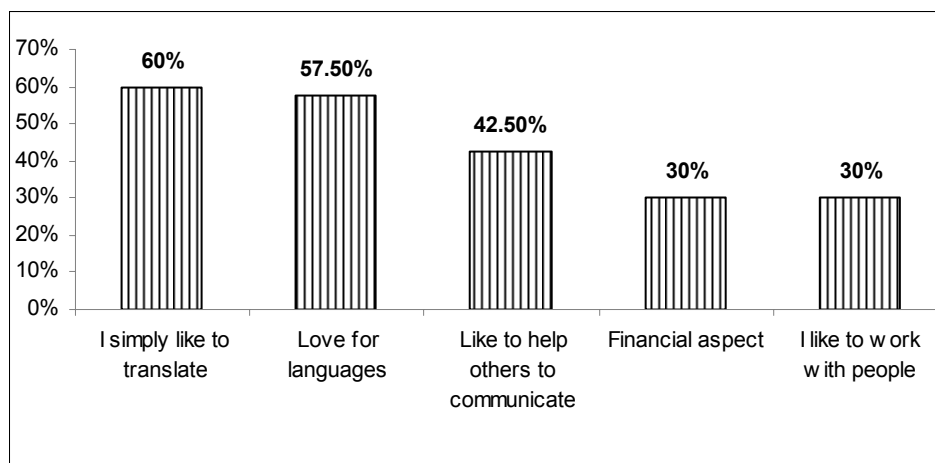
‘Are there any aspects of your work in which you would like to improve?’ 60% of the participants said that they would like to improve their time management, and a further 35% said that they felt the need to improve as far as keeping deadlines and estimating the time needed for translation are concerned. It seems that this particular skill requires the same psychological qualities as any other self-employed profession in which it is vital to strike a balance between intensive mental effort when full concentration is required and the mind is mobilising all cognitive resources, and the mind’s need to rest and relax to replenish the resources needed for efficient work. Although as mentioned in section 6.2.2 professional translators are aware of the fact that translation is a high energy consumer (77.5%), they still are not fully satisfied with how they manage time in their work and this indicates that there is room for improvement in terms of self-control. One translator included advice on time management quoted below:

focus on time management from the very start, try to specialize in selected fields, use the Internet wisely, accept advice from professionals, have your work proof-read at random, read original works in languages A, B and C; follow cultural, political, economic events, etc.

So far I have analysed potential and real translators in terms of their ideas about the profession, the activity, the bilingual foundations which they use and the actually applied procedures by practicing professionals. Frequently, I pointed to individual, highly idiosyncratic preferences to go round certain tasks intrinsic to translation as a mental process. To make the picture more complete in terms of the human factor which is involved I also looked at the actual person performing the activity, the translator as an individual with the overriding aim of finding confirmation for the ability to build Knowledge Integration Networks. The final section of the present analysis is devoted to the translator as an individual to make the invisible person (see Venuti 1995) for a change visible (see Tymoczko 2007).

#### 6.2.5. The translator as an individual

Since every translator is a bilingual but not every bilingual will become a translator the first question that needs to be asked is the motivating factor which makes some graduates of language departments want to choose a career in translation. The answers are represented by percentages in graph 28.



Graph 28. The motivating factors behind choosing a career in translation.

The favourite reasons, ‘love for languages’ and ‘I simply like to translate’ were dominant in the choices marked by the translators. They point to the relevance of affective factors which make a passion (love for languages) and pleasure (I simply like translating) a significant reward for the work put into developing professional competence and expertise in translation (cf. the questionnaire study reported by Plusa 2007: 94). As I had already mentioned the information hidden behind choosing, ‘I simply like to translate’ still remains to be uncovered and explained possibly via personality research (Henderson 1987, Schweda-Nicholson 2005, Kurz 2000, Zawada 2009) in which attempts could be made to see which personality types are attracted to the profession, and which are not following the psychological principle that people instinctively choose activities which agree with their naturally favoured ways of doing things (Jung 1923). This could help to pinpoint the necessary qualities which not only predispose people to become good translators but which make them happy to be translators. Although there is a long list of requirements that translators should meet, which was partially discussed in chapter four, there has been a dearth of empirical studies which would provide at least descriptive observational data to confirm how the prescriptive qualities expected of translators match the reality. A translator’s skills profile issued by the European Commission and discussed in chapter four specifies the intellectual and psychological requirements. There is no

doubt that the demands are extremely high and not many graduates of foreign language departments will be able to meet them.

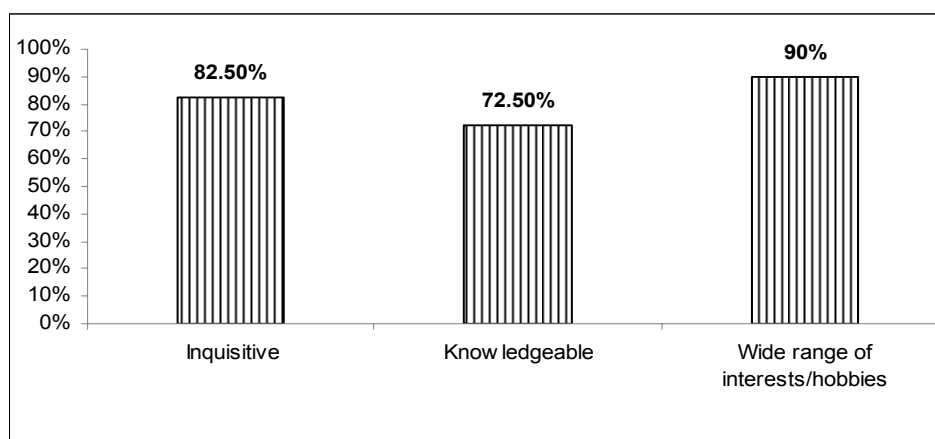
What image or profile of the real, not ideal, translator emerges from the study conducted for the purpose of this analysis? Generally the image is very positive which is straightforwardly reflected in the fact that as many as 40 professionals responded to the questionnaire without any promise of financial remuneration. They did so in response to an appeal by an academic who can only express her appreciation and gratitude for their precious time spared to provide answers to 50 questions. What is more the majority of the respondents did not stop at ticking adequate answers from the multiple choices provided but they frequently supplemented the chosen answers with insightful comments which allow me to draw some generalizations on their behalf.

Professional translators are undoubtedly people with high intellectual potential. They see themselves as inquisitive individuals (82.5%), some of the respondents added exclamation marks when marking 'yes' to the question, 'Are you an inquisitive person?', other comments included, 'to a certain extent', 'sometimes'. Only one respondent marked 'no' and 5 marked 'I'm not aware of it', and one translator added 'it depends on the subject'. This means that generally speaking translators are intellectually curious and keen knowledge seekers, like to learn new things and are perseverant in their hunger for making sense. These qualities are certainly what they need when translating. Another question aimed at testing whether they consider themselves knowledgeable people. As many as 29 translators (72.5%) said 'yes' only 2 said 'no' and 9 marked 'I don't know' as the most relevant answer in their estimation. Still the fact that as many as 72.5% of the translators analyzed in this study consider themselves as knowledgeable is possibly a result of their professional career in translation where a wide knowledge base is needed, and it is constantly extended and updated due to the on-line need to activate, integrate, or acquire new knowledge currently unavailable but urgently needed for the task at hand. It was therefore not surprising to see as many as 90% of practicing translators admitting in the questionnaire that they have special interests, and that the majority of them in fact have a wide range of interests.

Individual special interests and hobbies entertained by the respondents included: buses, international transport, needle craft, fantasy literature, linguistics, psychology, history, finance, politics, literature, forensic medicine, Italian Renaissance art, climbing, flamenco, belly dance, horse riding, learning, water sports, motorcycling, tourism, anything connected to

J.R.R. Tolkien's *The Lord of the Rings*, medieval chivalric culture, reconstruction of historical events, tabletop games, role-playing games, science-fiction and fantasy books, craft, dancing, traveling, philosophy, spirituality, art, evolution (biology), astronomy, geology, mathematics, choir singing, diving, cave diving and related science, photography, science, ballet, philosophy, architecture, jogging.

The answers provided by the practicing translators are summarized in graph 29 below showing a cognitive profile of a professional translator.

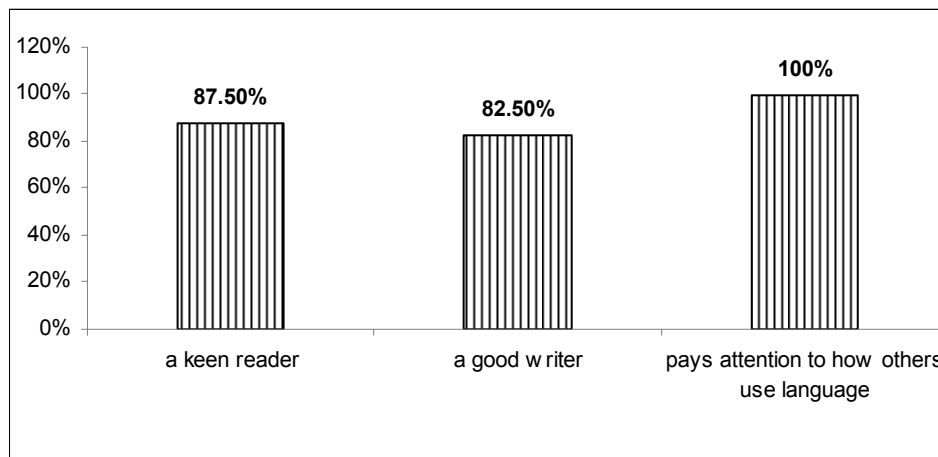


Graph 29. Cognitive profile of the professional translator based on self-assessment.

Focusing more on language related activities as many as 87.5% of translators admitted that they are keen readers. The vast majority of translators (82.5%) said that they were considered good writers at school, only 15% felt average and one translator admitted to having some problems with writing at school. Trying to probe their analytical skills which are mentioned as important in translation I also asked the professionals whether they were good at mathematics during their schooling. The results showed that only 52.5% of the subjects were good at mathematics, 35% said that they were average and 12.5% admitted to having some problems.

This possibly points to a strong language aptitude (Carroll and Sapon 2002, Pimsleur et al. 2004) bias in the group studied in this analysis therefore digging further into the intellectual qualities of professional practicing translators I asked about their language related behaviour, and more

precisely about their metalinguistic awareness. The question, ‘Do you pay attention to how other people use language?’ was aimed to test whether being conscious users of language/languages themselves they are observant, and perhaps more sensitive to how others use language in communication. The results showed that 100% of the professionals admitted paying attention to how others use language, two respondents added a comment, ‘very much’, ‘very much so’. The graph below shows the summarized language related profile of the professional translator.

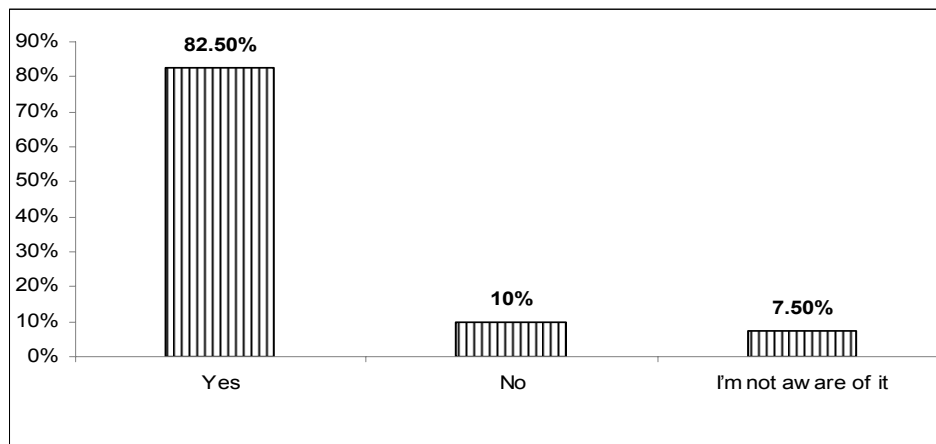


Graph 30. The language-related profile of the professional translator.

The 100% result is highly significant and supportive of the role metalinguistic awareness plays in the development of translation as a human skill to reach the level of expertise. Such a unanimous response is the first one noted in all the answers analyzed so far in this study. A possible explanation includes the need to see language as it is currently used by its many speakers/writers. Observing and paying attention to how others use language is perhaps a means to objectify the way a translator as an individual uses language, bearing in mind that translations are always performed for other people, other language users whose communicative expectations may differ from those subjectively held by the translator. This awareness of the translation addressee is something which is difficult for EFL students who start to practice their translation skill, as well as for novice translators who enter translator training. Many translation teachers would probably agree that novices in translation tend to treat their own idiolect as common social prac-



tice. The fact that translators so unanimously admitted paying attention to how others use language might show that in this way they update their internal data base of possible expressions, word combinations which are also a function of the changing times, affected by current events, technological advances and linguistic fashion. Since translating makes translators be more language observant when it comes to other speakers/writers, a related question seemed whether translating as their career has changed the way they use language themselves. Indeed, as many as 82.5% said that translating has changed they way they use language which, as compared to only 10% of respondents who said 'no' and 7.5% who said that they were not aware of it, is a statistically valid result.

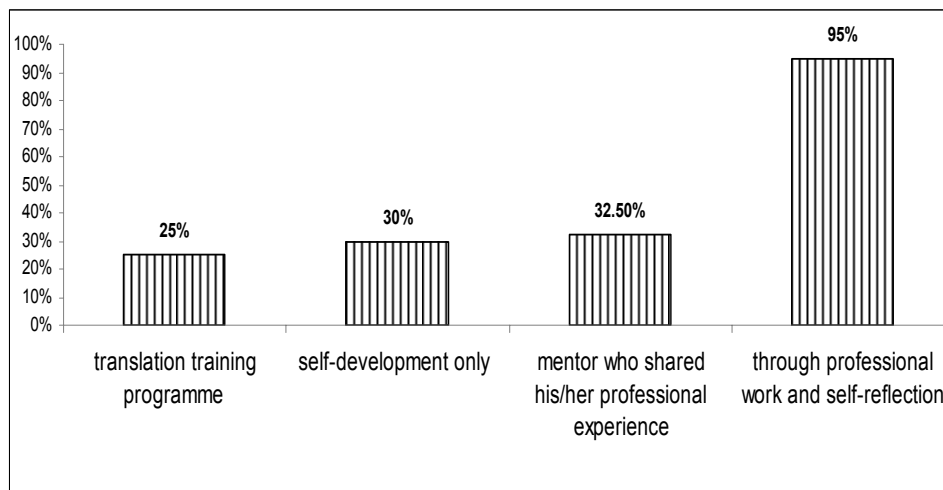


Graph 31. The impact of translation as a profession on the way translators use language.

In a way to find out that professional translators are highly sensitive language users is not surprising as it is what is professionally expected from them (Nida 2002). Since, however the professional translators who took part in the study formed a group with varied professional backgrounds, diverse kinds of translation in which they specialise, as well as the fact that the length of time for which they have provided translation services on the market stretched from 1 year to 40 years, the finding is significant and it confirms the importance of metalinguistic awareness and ability in the process of the evolution of translation as a human skill.

So far the emerging image of the translator as an individual has focused on their general cognitive make up and language-related skills. Translators appear to be knowledgeable people, intellectually curious, with versatile interests and hobbies able to skilfully use language and are conscious of its impact as well, as observant on how it is used by others. It is virtually impossible to say whether these qualities had been granted to them prior to their translation experience, or whether they appeared as a consequence of their experience in translating. One can only assume that probably both kinds of aetiology are involved.

As it can be gathered from the study translation is not a career for everybody (Hejwowski 2004), but as the data so far show those who have chosen it seem to enjoy it. It is definitely a career for versatile personalities, people with a wide range of interests, intellectually curious who like the multitasking involved in activating and integrating all kinds of knowledge needed for the task at hand. The question how to train, or educate (De Beaugrande et al.1998, Klaudy 2003) such professionals is continuously discussed and debated (Cronin 2005, Kiraly 2006, Gile 1995/2009). What might seem interesting is the fact that as many as 21 of the translators who participated in this study have not had any formal training as translators. What is more as many as 22 (55%) have not attended any workshops for translators. Graph 32 below shows how translators in this study acquired their expertise.



Graph 32. Different paths to translation expertise.

The choices marked by practicing translators show something significant about translation as a human skill and its developmental potential. First of all, it has to be acknowledged that translator training institutions in Poland are a fairly recent phenomenon (Plusa 2000). However, this high percentage of self-trained successful professionals confirms the validity of the concept of the translator as an expert learner discussed in chapter five. Those individuals who are able to follow this path of professional development can indeed become good translators without formal training, in accordance with the definition of translation competence as experience-derived knowledge (Toury 1995, Kiraly 1995, 2005, Chriss 2006, Gouadec 2007, Sofer 1997/2006) internalized and made productive through practice and conscious self-reflection (Donald 2007b)

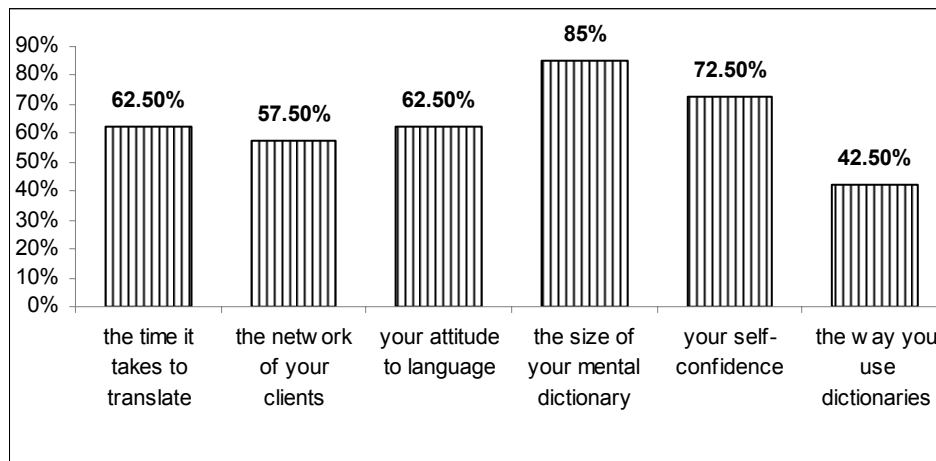
These results confirm that the psychological epistemology of translation skill is best located in constructivism<sup>6</sup> according to which humans acquire expertise through experience (Kiraly 2000, Klir 2001). Today's translator training programmes are acutely aware of the need to provide trainees with real life experiences (Kiraly 2005, Kearns 2008) and the role of self-reflection is stressed by key scholars in TS (Gile 1995/2009, Cronin 2005, González Davies 2004, Kelly 2005). Self-reflection undoubtedly enhances self-learning but it also amplifies the experience of KIN performed for a translation task, strengthens memory traces which will be left by every translation experience and used in future when the translator assesses his/her performance in terms of quality and economy. These traces will become stored in the personal memory archives and, if needed in future will be recalled to make the KIN perhaps more efficient. Despite the different paths to translation expertise, the majority (67.5%) said that they would be interested in attending workshops for translators and a further 30% said that they would have been interested in such workshops when they were starting their career but not now. This gives a decisive majority who are interested in expanding their expertise through training with only 1 out of 40 translators who was against it. A quote from the recently revised edition of Daniel Gile's (2009) seminal book, sums up the discussion on different paths to translation expertise and translator training:

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<sup>6</sup> According to constructivism, all systems are artificial abstractions and they are not made by nature to be discovered by us, but we construct them by our perceptual and mental capabilities with the domain of our experiences (Klir 2001). This view is compatible with the perception of a translator as a systems intelligent person (see chapter five).

Formal training is not mandatory, but it can perform at least two important functions. One is to help individuals who wish to become professional interpreters and translators enhance their performance to the full realization of their potential. The other is to help them develop their translation skills more rapidly than through field experience and self-instruction, which may involve much groping in the dark and learning by trial-and-error (Gile 2009: 7).

Following the translator as a developing individual irrespective of their career path I asked the respondents to reflect upon their professional careers and self-assess which aspects have positively changed with their experience. Each translator could choose as many aspects as they felt valid in their case and most marked at least two or three aspects while several marked all of them. Graph 33 below shows the distribution of these aspects which were marked by translators as having changed positively with time.



Graph 33. Aspects which positively changed with experience.

As the results confirm acquiring expertise in translation has an impact on the translator as an individual. As many as 85% felt that the size of their mental dictionary has grown with their experience, and as many as 72.5% marked a significant increase in self-confidence. The self-reported awareness of the effect of translation practice on the size of the translator's bilingual mental lexicon stimulates further questions referring to the functional organization of the internal vocabulary store in

people who provide translation services. Unfortunately, the effect of translation practice on bilingual memory remains an under researched domain although quite recently some new studies have addressed this issue in conference interpreters (see Tymczyńska 2011<sup>7</sup>). Wilss (1999: 220) as early as in 1999 observed that in general memory research had not attracted much attention from TS scholars. Yet, it is the translator's and interpreter's most precious tool. As it was discussed in chapter two and hypothesized in chapter five it is plausible that decisive changes in the functional organization of bilingual memory take place (and have to take place) so that the translator can navigate his/her memory to allow for efficient knowledge integration (KIN) and fluent interlingual lexical access (De Groot 2002, Presas 2000). The need for language control (see Green 1993, De Groot and Christoffels 2006) driven by the demand to have both languages simultaneously active, yet kept clearly apart in the actual articulation of the translation, calls for efficient meta-cognitive supervision to filter out unintended language interference (Whyatt 2010, Tymczyńska 2011).

Apart from the size of the mental dictionary, the highest scoring aspect which has changed with years of practice was the feeling of increased self-confidence (72.5%). In chapter five I discussed the postulate that the process of acquiring expertise in translation perceived from the perspective of a translator as an expert learner can be viewed as a process of developing self-confidence. Obviously the same principle applies to other complex skills which are developed to the level of expertise. With time and practice and conscious self-reflection many constituent actions become proceduralised (see Squire and Kandel 2009), adapted to the individual cognitive make-up of the user and encoded in the form of algorithms later used by memory to trigger off activation and integration of knowledge, needed for complex tasks like translation, or creative writing, or playing an instrument. Bartlett (1932/1967) would say that the repertoire of schemas is growing

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<sup>7</sup> Tymczyńska (2011) conducted a study of lexical access in trilingual interpreters, interpreting trainees and trilinguals without interpreting practice and reported that against her expectations the group of practicing interpreters (employed by the EU) did not perform better in terms of reaction times but in terms of accuracy, lack of omissions and errors the professionals outperformed the trainees and trilinguals. Trainee interpreters did not perform better than trilinguals in all three categories which led to the conclusion that the two years of training are not enough to result in changes in the functional organization of their mental lexicons.

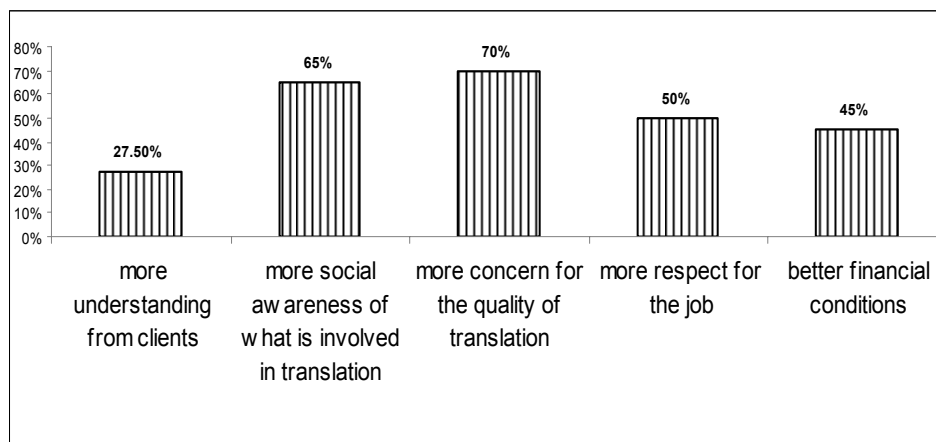
and since they are frequently used it is much easier to activate tasks schemas (Price and Green 1999), and the activation and integration is done with more self-confidence, and possibly also faster. I asked the question about self-confidence more directly in the questionnaire to further see whether the progress in the level of self-confidence is something translators are aware of. As many as 95% of the practicing translators noted that they felt more confident when translating at present than when they were beginning their professional careers. Only 2 out of 40 translators said that they were not aware of feeling more confident in comparison to how they felt at the beginning of their professional careers. One translator added a comment, 'yes (incomparably; should I ever knew what I was going to undertake...)'. There are still a lot of questions that one would like to ask and which are frequently asked by translation students including the most popular one, 'How long does it take to become a self-confident, competent translator?'. What do translators gain by becoming more self-confident? Does the fact that translators have more self-confidence mean that they translate faster?

The correlation between the time needed for translation and experience was marked by as many as 62.5% which allows to conclude that for the majority of translators the translation process takes less time as a consequence of better memory navigation, faster lexical access and more self-confidence about how to solve problems, and make appropriate decisions. It is not without reason that translation has been compared to a game of skill (Gorlee 1994). One translator included an interesting comment, 'if necessary, I can translate faster than before, but under normal circumstances translating is just as time consuming as it was'. The temporal aspect of translation performance has rarely been studied in controlled experiments (Jensen 1999, Jensen and Jakobsen 2000) although it is commonly assumed that time constraints and time pressure will tax the translators' performance in both written and oral translation (see De Groot 1997).

Among other aspects which have been marked as positively affected by experience in translation 62.5% of the respondents marked that their attitude to language has positively changed with experience in translating. This allows to assume that all the components of their communicative competence have become integrated, and they know more about both languages and become more in control of them, more aware of themselves as conscious language users. The network of clients was also marked by a slim majority of respondents as positively affected by translation practice.

The way translators use dictionaries was the least positively assessed as changing parallel to experience.

Having elicited the changes that translators see in themselves as a product of their career in translation I asked the professionals to mark these aspects of translation as a profession that they would like to see change. The answers marked by those who provide translation services are demonstrated in graph 34 below.



Graph 34. Aspects of the profession which need improvement.

The results showing the need for improvement in the social concern about the quality of translation reported by 70% of the translators are significant, and reveal a lack of understanding and respect for the quality of translation as a final product. The need for more concern about the quality of translations is generally admitted by TS scholars, but the policy of controlling the quality is virtually non-existent, especially in countries where no accreditation is required to provide translation services. As pointed out by Chriss (2006: 141) there is a lot of asymmetric information about “which translators are worth hiring and working with and which should be avoided at all possible cost”. On the other hand, translators have to prove to their clients that they are professionals who can do their work reliably and responsibly. Considering the growing need for translation services of high quality much is left to market forces. Gouadec (2007), for example is of the opinion that competition will get rid of the ‘outlaws’ and survival on the market is the best indicator of the quality that is provided by individual translators. If

however, we accept that it does not matter whether translation is a craft or an art when in today's world it is primarily a business, we have to say that it is a jungle out there (Wilss 1996, Gouadec 2007). Competition means that frequently the clients are not interested in high quality products (Nida 2002) because they cannot themselves tell a bad translation from a good one since they do not know the foreign language involved (cf. Durban 2003<sup>8</sup>). They are mostly interested in how quickly they can get it, and of course at the lowest possible price. A concern for quality is expressed in the guidelines and recommendations issued by associations of translators and interpreters on a national and international level (FIT, STP, TEPIS). These organizations stress that concern for quality shows respect for business ethics and the translators' awareness that they bear responsibility acting as "the communication conduit for a product or service, for information or opinion, and so must consider the consequences of their linguistic decisions" (Chriss 2006: 140). The issues of translation quality and professional ethics are complex and require a broad discussion which exceeds the intentions set behind this volume. The fact that as many as 70% of the practicing translators wish that the concern for the quality is improved points to the need to educate society about translation quality, and its relationship with adequate expertise.

Indeed, the need for more social awareness of what translation involves is the next high scoring aspect. As many as 65% of the translators expressing the need for more understanding confirm that translation as a skill is socially poorly understood (see chapter 1). This lack of understanding is reflected in frequently unrealistic demands from clients as far as the time needed for translation is concerned. Furthermore, those who seek translation services are unaware of the expertise which is needed to produce an adequate translation. As a result they frequently approach language students, or anybody with some knowledge of the foreign language and expect an adequate translation. In effect many translations available on the open market are performed by unskilled translators who rely on their natural ability to translate which as discussed in chapter three is characterized by formal flaws (linguistic and/or conceptual) that may affect the interpretation of meaning by TL receivers. It seems that more social awareness of what is involved in translation is a very much desired improvement and a

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<sup>8</sup> Durban's (2003) brochure, *Translation: Getting it right – A guide to buying translations* is available on the website of FIT – The International Federation of Translators.



challenge for Translation Studies. Some scholars observe that the so much needed profession is still undervalued (Chriss 2006, Snell-Hornby 2006, Gouadec 2007). Educating society and community on a global and local level about the developmental nature of translation as a human skill might ultimately be hoped to build due respect for the profession. The question how to do it requires a complex insight, at this point in the discussion presented so far, I am inclined to claim that the education should start with foreign language students at university level as they are the most likely potential translators. During their language studies they should have a chance to receive at least a taste of the skills<sup>9</sup> which are needed to produce a translation of adequate quality. Exposure to translation tasks during language studies at university level is needed not only to raise awareness of translation as a process but to inform students (potential translators) about professional ethics, and to entail a process of self-selection of those who will in future take up a career in language translation.

To sum up, professional translators who shared their experience and self-reflected on their own process of development come across as interesting individuals who are very much aware of the ongoing process of development in their human ability to translate. This process necessitates constant self-learning to maintain and enrich the available knowledge base. Considering the above analysis of the translator as an individual it seems plausible to conclude that the development of the human skill to translate involves the ability to integrate knowledge for the purpose of translation.

### 6.3. Conclusions

The purpose of this chapter was to provide descriptive data about the real agents, the potential and practicing translators. The data discussed here confirm that translation as an activity is idealised by those who lack experience. The clash between these uninformed ideas about translation as an activity and the transformation in these ideas as a result of experience was visible in the students growing awareness of the complex nature of translation as a skill, which involves integrating knowledge from different domains and from different memory storages (declarative and procedural). A

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<sup>9</sup> see Witte et al. 2009 on the popular policy to drop translation courses in modern language departments.

drop in the percentage of the EFL students who see themselves as future translators seems significant. It is possible that choosing a career in translation is open to self-selection and with time and experience EFL students discover for themselves whether or not the requirements of the work involved in translation match their individual cognitive make-up and their personalities. Personalities which are characterized by intellectual curiosity, inquisitiveness, high level of self-control, a wide range of interests, quick thinking, patience and perseverance, as well as readiness to learn seem to be likely candidates. These qualities might be relevant for designing translation aptitude<sup>10</sup> tests which could help to select the most promising candidates for translation training programmes more reliably than the frequently used L2 proficiency tests. Interestingly, more EFL students seem to prefer written translation and only few see interpreting as their first choice. Although practicing translators also seem to favour written translation, nearly half of the PT subjects said that they are ready to provide oral as well as written translation. This shows that the pronounced differences between the processes involved in written translation and interpreting are not so important for practicing professionals. This result can send a message to translator training methodologies that both modalities share a common store of knowledge about translation, and practice in both modalities can prove beneficial for written translators and interpreters alike.

The analysis of ideas about translation as an activity provided a lot of insights into the nature of the processing involved in translation performance. The similarities between all the groups of subjects were significant in their assessment of translation as an activity and they included the perception of translation as a high energy consumer. These observational data confirm that the task of translating uses a significant amount of mental resources, and its tiring effect is experienced by the more and less experienced translators. Although translation is attested to be intellectually highly demanding, it is also perceived as enjoyable as if the translator was indeed involved in an intellectual game, where overcoming major and minor hurdles is a part of the translation process. This highly affective attitude is confirmed by the practicing translators who in their majority admitted that they treat every new text as an intellectual activity and a chal-

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<sup>10</sup> Research on language aptitude tests could be of help here although there are still disagreements among SLA scholars on those features which are the most relevant to predict success in L2 learning (see Carroll 2002, Pimsleur et al. 2004, Rysiewicz 2008).

lenge. The intellectual benefit of learning new things is the primary reason which keeps translators in the profession. The generally positive attitude to translation as an activity is an asset not only for translator trainers but also for L2 teaching and learning methodologies, an asset that should no longer be ignored as translation is socially expected of bilinguals and it can be used as a “hook to amplify pride in bilingualism” (Malakoff and Hakuta 1991: 163) on the one hand, and make L2 learners and users aware of their intercultural position.

A significant amount of attention in this chapter has been devoted to the bilingual foundations of the subjects who represent potential and practicing translators. Since in translator training TC is built on these foundations it is my belief that as much as possible should be known about their structure, organization and functioning before a pedagogical effort is made to build professional translation expertise upon them.

The role of metalinguistic knowledge which develops parallel to growing L2 proficiency is possibly very important for the development of the human skill to translate. Here, as in the case of Roehr’s (2008 quoted in Paradis 2009: 7) study, the relationship between metalinguistic knowledge and the human skill to translate is that of reciprocal benefit. In fact the results confirm that the experience of translation has more than a ripple effect on bilingual knowledge including L2 proficiency. The results reported by the group of practicing translators decisively confirm that translators are expert language learners. The tacit assumption that translators are, or should be equally proficient in both working languages is challenged by the data showing that certain aspects of L2 use remain problematic for well experienced practicing translators. Translation by its integrative nature and the requirement to activate and integrate knowledge (KIN) provides a window on how bilingual minds specialise in interlingual and intercultural communication. The proposal of KIN discussed in chapter five seems to provide the framework in which the relationship between linguistic, metalinguistic and extralinguistic knowledge can be investigated in all those who perform translation, irrespective of their stage at the developmental continuum of translation as a human skill.

The integrative nature of translation as an activity in professional practice has been extensively analysed in section 6.2.4. The results seem to confirm that every new translation task sets off a process of knowledge integration that was hypothesized in chapter five. The process starts off at the first encounter with the SL text, and it is not as wished by translation peda-

gogues always facilitated by a translation brief. The first reading of the SL text seems to activate the translator's prior experience, which allows assessing the level of difficulty of the task at hand, as well as getting the gist of the content and positioning it against previous experience in translating similar texts. This initially created knowledge integration network (KIN) is further developed by some factual research which was frequently reported by translators to be prior to the onset of the physical production of the TL text. Looking at similar TL texts and refreshing TL vocabulary was also reported as a part of the preparatory activities before the actual translation process. These procedures strongly indicate the need for knowledge activation and integration before the translator feels ready to start typing the TL text. The fact that the favoured preparatory activity was doing some factual research points to the primacy of conceptual activation and integration, which as hypothesized in chapter five facilitates lexical access when the TL text comes into existence. The intellectual curiosity and the frequent need to acquire new knowledge in order to create an adequate knowledge integration network (KIN) is perceived as a challenge and a reward of the profession. The use of the Internet as a 'reference shelf' of collective knowledge, both factual and linguistic, is symptomatic and exceeded the use of electronic dictionaries in case of the practicing translators studied in this analysis. The possibilities of exchanging ideas and sharing translation problems with others include translators' internet forums which were reported to be used by the majority of translators. Revision as an integral part of the translation process is a matter of concern which might require some additional skills. The data reported by practicing translators point to the need to re-frame from the initially created KIN to ensure adequate revision leading to the final version of the TL text. Whether or not the re-framing always requires a temporal (temporary) break from the already produced translation is a matter which needs further investigation with reference to the quality of translation as a final product. It seems that ensuring adequate revision and involving others as revisers and proof-readers also requires attention from translator trainers especially in the case of translating into the B language (see Pokorn 2005). The fact that translators see themselves as open to improvement is undeniable.

The final section devoted to the translator as an individual aimed to provide an empirically valid personal profile of those who have chosen to pursue a career in translation. The results show that the translator is best perceived as a developing self. The cognitive profile of the practicing translator con-

firms care and attention to maintain and up-date one's knowledge base through intellectual curiosity and a wide range of interests/domains in which one can specialize. The language-related profile shows the primacy of language maintenance needed for the job. The role of metalinguistic and metacognitive abilities is yet again confirmed by the subjects admitting that their experience in translation has affected the way they themselves use language. The answers and comments provided by practicing translators seem to confirm that the evolution of translation as a human skill involves learning to integrate all the knowledge needed for the task at hand. The question how to teach knowledge integration needed for translation tasks is open to suggestions. It is possible that the time consuming translation process could be dismantled and individual stages could be practiced before students can be expected to perform entire professional translation projects, following the principle that complex skills consist of simple subskills (see De Groot 2000: 53 for a componential approach)<sup>11</sup>.

The major question remaining is whether the ability to integrate knowledge develops as a slow process enhanced by professional experience or whether it is something we can explicitly teach speeding up the otherwise slow process. This question is taken up in chapter 7 which describes 2 experiments in which the hypothesized ability to integrate knowledge as a decisive constituent of translation expertise is put to the test<sup>12</sup>.

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<sup>11</sup> A book by González Davies (2004) is a rare but an excellent attempt to provide translation trainers with a pool of practical tasks which can be used to help trainees to practice knowledge integration involving the conceptual and verbal level.

<sup>12</sup> The questionnaires used for this study can be obtained from the author via e-mail upon request.



## Chapter 7

# **Empirical investigation into knowledge integration in the translation process – a Translog study**

The purpose of this chapter is to search for further empirical validation of the hypothesis that the development of translation expertise relies on the growing ability to create Knowledge Integration Networks relevant to the translation task at hand proposed in chapter 5 and confirmed by descriptive research data discussed in chapter 6. The twofold analysis presented in this chapter has different aims. The first study aims to investigate the performance of translators who are at different points on the developmental continuum in the process of translation skill development and who were asked to translate the same text. The second study describes an experiment designed to test a hypothesis that creating a KIN before the onset of the translation process will have a positive effect on the performance of inexperienced translators. Both studies investigate the performance of translators during the process of written translation production and they share the same research method. The chapter will open with the description of the research method called *Translog* which was used in both studies. Then both studies will be described and the results will be discussed in order to further validate the hypothesis that the human ability to translate to reach the level of expertise involves the ability to integrate knowledge in the translation process. The chapter will close with conclusions and implications for translation pedagogy.

### 7.1. Research method

Translog is a computer software program which was designed by Arnt Lykke Jakobsen, his son Lasse Schou (Jakobsen and Schou 1999, see Jakobsen 2006 for the program's history) and his colleagues from the Copenhagen Business School. The program records all the keyboard activity performed during a TL text production. In essence it is similar to key log-

ging (or keystroke logging) software programs used in the study of text production in creative writing research (see Sullivan & Lindgren 2006 for an overview of the research method and its applications). Lauffer (2002) mentions that before Translog was available cameras were used to observe the computer, mouse and keyboard activity of translators while they performed a task. All the data was later transcribed into detailed logs. As expressed by Lauffer (2002: 63), “Translog was developed to obtain quantitative reinforcement of assumptions about translation”. This quantitative reinforcement was very much needed to externalize translation performance in a less invasive method than Think Aloud Protocols. Using Translog to investigate the translation process the translator is not asked to do anything but translate a text. The SL text is visible in the top part of the computer screen and the translator types the TL text in the bottom part of the screen which means that the SL text is all the time available to the translator. While being totally unobtrusive to the translator the program records all the keyboard activity into a file (Translog file) which can be later played back and analyzed in detail. As expressed by Jakobsen (2006: 95), “Using the computer to record a translator’s keystrokes provides a window onto the process” with the main assumption that “the temporal course of the typing process is a recordable and observable reflection of underlying cognitive processes” (Jakobsen 2006: 96). The research method inspired by Schilperoord’s 1996 publication entitled, *It’s about time. Temporal aspects of cognitive processes in text production* can be applied to study the interaction of the cognitive processes by analyzing the temporal patterns of text production and pauses in the flow of typing which reveal the dynamic processing involved in text comprehension and text production not only during the translation process but also in other monolingual or multilingual tasks. In a way it is possible to call Translog a keyboard spy (cf. *Camtasia* as a screen spy) as it records the file and allows to see something that is otherwise never visible in a finished translation as a final product without any intrusion into the translation process as such<sup>1</sup>. The translator who is translating a text in Translog is not disturbed in any way in his/her creative translation process.

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<sup>1</sup> It is possible to compare Translog to eye-tracking programs which record eye fixation and movement to infer the focus of attention and information processing in the observer or reader of a text (Rayner 1998, Wright and Ward 2008). Recent developments include a combination of eye tracking with Translog (Jakobsen 2011).



The Translog program has two independent but interconnected components, Translog User and Translog Supervisor. Translog User is the component designed for data collection in the form of log files based on projects created in the Translog Supervisor. The experimenter when preparing a project in the Supervisor component prepares an input text (Source Text) and specifies a number of parameters which will determine how the text will be displayed in the User component for a subject who participates in the experiment. The subject works in the User component on a split screen. As soon as the 'start logging' command is chosen the Source Text is displayed in the top half of the screen and the Target Text window opens at the bottom half of the screen where all the typing and editing of the translation takes place. The actual key logging does not interfere with the subject's text production and text editing activity which makes Translog an overt research tool with high ecological validity although the subjects are aware of taking part in an experiment, and when they finish their translation and choose the command 'stop logging', the program will ask for the file name so that it can be successfully saved and later retrieved for analysis. The log files saved in the Translog User component can be accessed in the Translog Supervisor component. When a log file is opened the SL text and the TL text are displayed on the left (just as it was the case in the User component) and the log file is displayed on the right hand side of the screen. The log file consists of keystrokes, some symbols and time indications which allow the observation of all the activity performed on the keyboard by a person translating a text. As explained by Jakobsen (2006),

This behaviour may seem far removed from the thinking that underlies the text production, but the advantage of such focusing is that hard, machine-recorded data are made available about an aspect of the total behaviour in text production, which our theorizing about text production in translation cannot ignore. It may not be possible to make detailed inferences about mental language processes from these data alone, but any attempt to account for these processes should take evidence from every aspect of the total situation into account (Jakobsen 2006: 99).

The statistics available through Translog include: the duration of the TL text production, total number of user events (TUE) which include a keystroke or a cursor/mouse movement, number of characters noted as text production (TP), all the text which was eliminated or erased by the trans-

lator (TE) that is elements otherwise invisible in the finished product yet very indicative of the problem solving and decision making in the translation process. Further data include all the instances of cursor navigation (CN) and mouse events (ME) which show how the translator moves within the TL text. These aspects are revealing for the process of self-revision and on-line editing of the emerging TL text. Most importantly, however the program records pauses and time delays which can be used to interpret the information processing and reaction times needed to make a decision on how to translate a given stretch of text or a particular word. Further data calculate the ratio of TUE per minute and text production per minute for each individual Translog user.

Using reaction times to infer language processing has a long history in the studies of bilingual lexicon (Dijkstra and Van Heuven 2002, Kroll and De Groot 2005) and can therefore be used to infer language processing in the study of the translation process. While mental lexicon research uses reaction times to infer the speed of lexical access (see chapter 2) by measuring reaction time for individual words (usually nouns) taken out of context, the lexical retrieval which can be observed in Translog files is contextualized and, similar to psycholinguistic experiments using e-prime<sup>2</sup> software, calculated with the precision of milliseconds. Therefore, analyzing reaction times during the translation process to infer the ease or difficulty of lexical access seems justified. Short pauses will indicate fast access, quick decision making possibly using automatized memory traces, whereas longer time delays will indicate either problems with fluent retrieval followed by conscious decision making, or consulting the Internet for necessary factual information to solve a particular translation problem. All the data available through Translog can be analyzed quantitatively which makes Translog a valuable contribution to the translation process research which so far has lacked a tool which would allow for quantitative analyses with the qualitative case studies as the most frequent research design in empirical Translation Studies. Furthermore, it is possible to replay the actual typing process of the TL text production offering a dynamic visualization (see Jakobsen 2006: 100) of the translator's efforts involving problem spotting and problem solving with sometimes numerous trials and errors. The replay function has been used by some scholars

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<sup>2</sup> E-prime is a popular software program for measuring reaction times following the presentation of stimuli in psychological and psycholinguistic experiments.

(Hansen 2002, Buchweitz and Alves 2006) to collect retrospective data by asking the subject to comment on the translation process while watching it being replayed in actual time.

A sample of the Translog file from Study 1 will provide an illustration of the data set collected by Translog. The section below shows a sample of the Translog file which was created while the subject (G1 AZ) was working on the translation of the following sentence from the SL text (in Polish):

*SL text (Polish): Film oparty na opowiadaniach Jarosława Iwaszkiewicza, wydaje się być subtelną i wzruszającą historią o niemożliwej miłości.*

While the subject produced the TL version in English below:

“The movie based on Jaroslaw Iwaszkiewicz’s short story seems to be a subtle and poignant story about an impossible love”.

The Translog program recorded the following file:

```
[Start] [*30.445]The*****movie*is*based*on*the*sto
ru*xy*b*of*Jaroslaw*Iwaszkiewicz[*15.275] [^] *xy*
* [^] *xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*
xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*xy*
*seems*to*be*a*subtel*and*poignant*s*s*tory***
*an*xy*xy*xy*an*impos*sible*love[*28.908] [^] *short*
* [^] *.
```

The symbols explained:

```
Pause = *(1 second)
Pauses (time delays) longer than 9 seconds are counted
[*31.436]
Eliminated text = xy
Cursor navigation = →→→
Mouse event = [^]
```

Looking at the final product, the TL sentence it is impossible to guess where the most time consuming translation problems occurred. The Translog file which has been recorded during the translation process makes the problematic time consuming stretches visible. The subject took 30.445 seconds before starting to type the translation. There were two time delays (15.275 seconds and 28.908 seconds). The eliminated text



Translog software with eye-tracking (Jakobsen 2011) which offers yet further insight into mental effort management and distribution of cognitive attention (Wright and Ward 2008) during the translation process.

Unfortunately, it is as yet not possible for Translog to record dictionary look-ups or Internet searches performed during the translation process using the Translog program alone. Yet, it is possible to supplement the data on text production available through Translog with a screen capture program such as Screencam or Camtasia which will record the translator's activity outside Translog when the external sources including electronic dictionaries and data bases are consulted during the translation process. Translog will record the time pauses between typing down the translation and Camtasia will allow seeing what the translator was looking at to find assistance in making the final decision. Combining such methods offers a comprehensive insight into problem solving during the translation process and allows to understand why and how translators are looking for external information (Lauffer 2002: 69). However, as it is to be expected and as it has been frequently mentioned by those who use the combined methods such experiments require infrastructure and are extremely labour intensive. Lauffer (2002: 60) for example, studied only three translators, a junior and a senior translator at Toyota Canada and a translator (no indication of the length of practice) who has worked with the Ontario Government's Translation Service. To study a large number of subjects requires a lot of time and effort not only in terms of data collection but also in terms of data analysis, and therefore it would be feasible in large-scale national or international projects.

In the studies which I carried out for my post-doctoral project described in this chapter I used Translog following a pilot study which confirmed that the method is sufficient to test the research hypotheses. The texts chosen for the experiment were simple in terms of language and translating them did not require any factual knowledge that would be outside the reach of the subjects who participated in the experiment. What is more, using a combination of methods (Translog + Camtasia) would further complicate the analysis which would run the risk of shifting the research focus from the translation skill development within a translator as an individual to other issues, e.g., the use of electronic resources in the translation process. This aspect of the translator's performance deserves a separate and thorough investigation which is not the focus of the present studies discussed in this chapter.

To sum up, generally speaking the software program Translog seems user friendly although obviously it is not the program in which translators normally translate and using it will constitute a novel experience for the translators participating in the experiment. In the study described by Laufer (2002) which used Translog among other research methods, a potential drawback of Translog was indicated. Although most translators said that they liked using Translog, some of them were short of certain features that they are used to, and which are not available in Translog including: spell-checkers, various fonts, underlining, highlighting and pasting function. The subjects who participated in my experiments, both Study 1 and Study 2 which will be described in detail below, generally found the program unobtrusive. Although the Translog program is not ideal and open to improvement as confirmed by the continuous efforts of its designer (see Jakobsen 2006, 2011 on subsequent versions of the program), it is possibly the most unobtrusive method of investigating the translator's performance available so far the use of which does not compromise the ecological validity of the translator's work. Just as it is the case in real life the translator works on a computer and is free to use any external resources which are available to him/her.

## 7.2. Study 1 – objectives, participants, procedure

The purpose of Study 1 was to conduct a comparative analysis of three groups of translators with different experience in translation practice: Group 1 (G1) included 10 2BA students of English as a foreign language at the School of English, Adam Mickiewicz University, Group 2 (G2) included 10 translation trainees who were in their 2MA year and who specialized in Conference Interpreting. Group 3 (G3) included 10 practicing translators with various length of practice, ranging from 1 year to 30 years of experience in providing translation services. The comparative analysis of the translation performance in the three groups of subjects was aimed to test the following research hypotheses:

- 1) The ability to integrate knowledge for the purpose of a translation task develops with experience.
- 2) The least experienced translators (G1) will integrate only part of the knowledge required for the translation task (e.g., only their bilingual knowledge). They will translate without the support of an

adequate Knowledge Integration Network (KIN) which will slow down the translation process and result in frequent interruptions because of low L2 proficiency.

- 3) The more experienced translators (G2), will make a conscious effort to build an adequate KIN which will extend the translation process and result in conscious metacognitive supervision with frequent checking for confirmation to ensure adequate translation.
- 4) Practicing translators with many years of experience automatically integrate knowledge needed for the task at hand which speeds up the translation process and makes it more fluent.

The three groups of subjects were asked to translate a short text from Polish into English. The direction, language A to language B was chosen so that in terms of comprehension the SL text is equally accessible to all the subjects since they are all native speakers of Polish. A further reason was that the Translog program is able to gather detailed data on TL text production and not on SL text comprehension. The text was carefully chosen according to the following criteria:

1. It has to be a complete text, not an extract of a larger text to eliminate the possibility that not knowing the entire text could hinder understanding of the purpose and function of the SL text.
2. It has to be fairly short so that it is possible to translate it in one sitting and translating it does not cause fatigue and tiredness which could cause cognitive overload or make it necessary for the subjects to have a break.
3. It has to be within the reach of the subjects' comprehension and vocabulary and understanding it is not dependant on prior factual knowledge.
4. It has to be ecologically valid in terms of the potential need to have it translated into English in real life.
5. It has to be fairly topical in terms of current events in which the subjects participate.

The choice of such texts is fairly limited and the text type (Reiss 1981) which was initially chosen and pre-tested in a pilot study was a film review. The film entitled, *Tatarak* by one of Poland's greatest directors,

Andrzej Wajda was just coming into Polish cinemas<sup>3</sup>. It received a lot of media attention and since most of Wajda's films have been shown in foreign cinemas, translating its review seemed a realistic commission that a translator can receive. The text consisted of 172 words (1, 033 signs). It was written in clear language and it seemed to match the requirements of such text types in terms of language and function. It was placed on an advertising leaflet which was available free of charge in Polish cinemas.

All the participants received a translation brief: Translate the following film review for an on-line English cinema magazine. The subjects were informed that they are participating in a translation process awareness project which aimed at gathering data on the process of translation with the help of the Translog program. They were not told how the program records the process and which information it makes available. This precaution was made not to influence the subjects' performance prior to the actual translation task. It might have happened that if the subjects knew what particular data are recorded (e.g., duration) they might have performed differently than in real life. Instead they were asked to behave as if they were commissioned to produce the translation, taking as much time as necessary. They were also allowed to use electronic dictionaries and the Internet as they normally use them when they translate at home. Since Translog does not record activities outside the program such as consulting e-sources the subjects were asked to mark the use of external resources typing a letter 'b' for bilingual dictionary, 'm' for monolingual dictionary and 'I' for the Internet sites directly before switching on to use them. This was done to make it later possible to accurately interpret longer pauses and time delays as spent on dictionary/Internet consultation and not on something else.

All the translations were performed in a computer lab with five work stations in several sessions. The researcher (myself) was always present and all the participants were instructed on how to proceed. When everything was clear the subjects clicked 'start logging' and worked on their translation until they finished and then they pressed 'stop logging' and the file was saved. Then the subjects were shown their log file and most of them were very much surprised by the detailed record of their translation

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<sup>3</sup> *Tatarak* (translated as *Sweet Rush*) by Andrzej Wajda won the Alfred Bauer Award at 59<sup>th</sup> Berlin International Film Festival for "opening new perspectives in the art of cinema" (<http://www.pisf.pl/en/film-production-guide-1/film-industry>).



process. The majority were impressed by the program and expressed their interest in the data which are made observable by the program.

From the 30 files recorded four were rejected as faulty. In one case the program switched itself off during the actual translation. Two subjects were inconsistent with marking the use of dictionaries and during one session the Internet dictionary became inaccessible. In total an equal number of 8 Translog files for each group were chosen for analysis.

### 7.3. Study 1 – data analysis

The focus of the analysis was on the TL text processing data available through the Translog program. The primary research question was: Are the effects of translation experience observable not only and as it can be expected in the quality of the translation as the end product (see Shreve 1997 quoted in chapter 5) but in the actual performance, to be more specific in the way translators type their translations? If there are pronounced differences between the three groups, the ultimate question was: Is it possible to infer from the results that with translation experience translators learn to integrate all the necessary knowledge for a particular translation task and their ability to create KINs has a positive impact on both, the process and the product?

The analysis focused on those aspects of the translation process which are believed to differ the most according to the translator's experience (see chapter 5) and they included:

- 1) duration, the total length of time taken by each subject to translate the same text
- 2) the number of dictionary/internet look ups
- 3) typing speed
- 4) distribution of the remaining time in the translation process including:
  - time spent before the onset of translation (time devoted to 'opening' the SL text')
  - time spent on post-draft revision
  - the amount of text elimination
  - the amount of navigation in the text (movement within the text, including making on-line changes to the emerging translation)

Each of the above aspects will be discussed with reference to the research hypotheses to see if the hypothesized KIN in the process of translation skill development can be supported by the empirical data collected in Study 1.

### 7.3.1. Duration

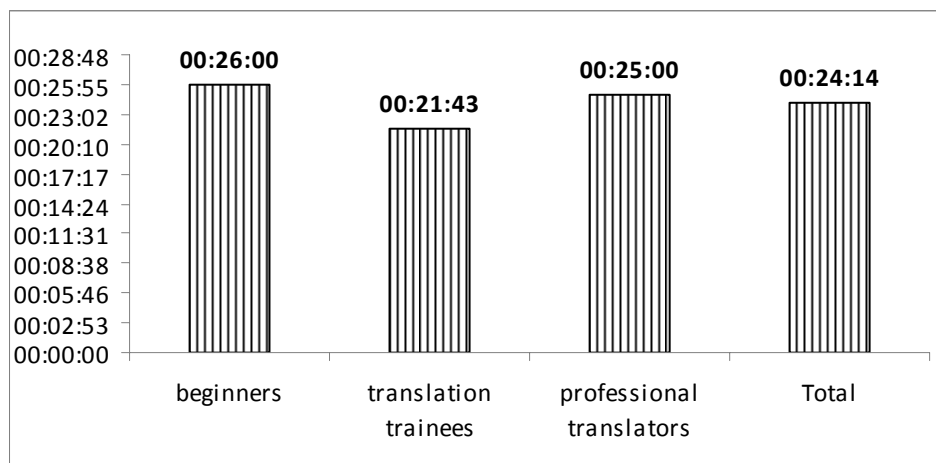
There were pronounced differences between the representatives of the three groups with respect to the amount of time which was devoted to translate the text. Since there were no time restrictions, it can be assumed that all the subjects worked on their translations at their usual pace. They were never hurried and were told to take as much time as they felt necessary. This information was hoped to remove any unnecessary time pressure which would test rather how translators cope with stress induced by time constraints. Although it is of course likely that in real practice translators sometimes do work under time pressure, it was not used as a variable in this study in which a single variable of translation experience was tested. The time spent on the translation of the SL text ranged from 7 minutes 49 seconds 390 milliseconds to 49 minutes 23 seconds and 292 milliseconds. The table below shows the duration for each individual subject in the three groups

Table 1. Duration of the translation task for individual subjects in the three groups.

Subjects	Duration G1	Duration G2	Duration G3
S1	11:15.341	12:47.821	07:49.390
S2	20:49.129	17:03.000	10:26.474
S3	22:58.577	18:49.966	11:53.145
S4	24:45.742	18:58.082	23:29.172
S5	25:28.701	21:59.100	28:13.043
S6	28:47.928	24:27.551	29:14.935
S7	36:57.039	28:19.123	39:32.513
S8	36:58.285	31:24.057	49:23.292

As it can be seen in the table, both the fastest and the slowest translators came from the group G3, which is the group of practicing translators. The result which might seem initially surprising has its explanation in the length of practice marked by each translator. The fastest translator has been providing translation services for 30 years whereas the slowest

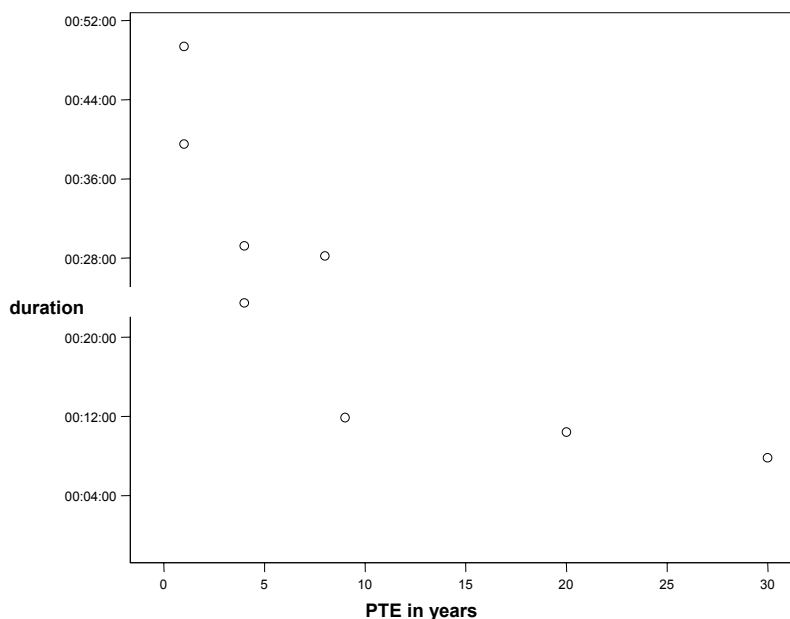
translator has been working as a freelance translator for 1 year. The question, ‘What do translators learn from experience?’, put forward in chapter five and hypothetically answered by the proposal of KIN, becomes even more justified in view of the above results. Looking at the individual raw data for duration is important because of the significant idiosyncratic differences within each of the three groups which amount to nearly 25 minutes for the least experienced group (G1), 19 minutes for the translation trainees (G2) and the surprising 42 minutes for the group of practicing translators (G3) when the slowest and the fastest translators are taken into account. These individual differences following an inferential statistical analysis using ANOVA disappear. The graph below shows the mean average for the duration of the task in the three groups.



Graph 1. Statistics for the duration data.

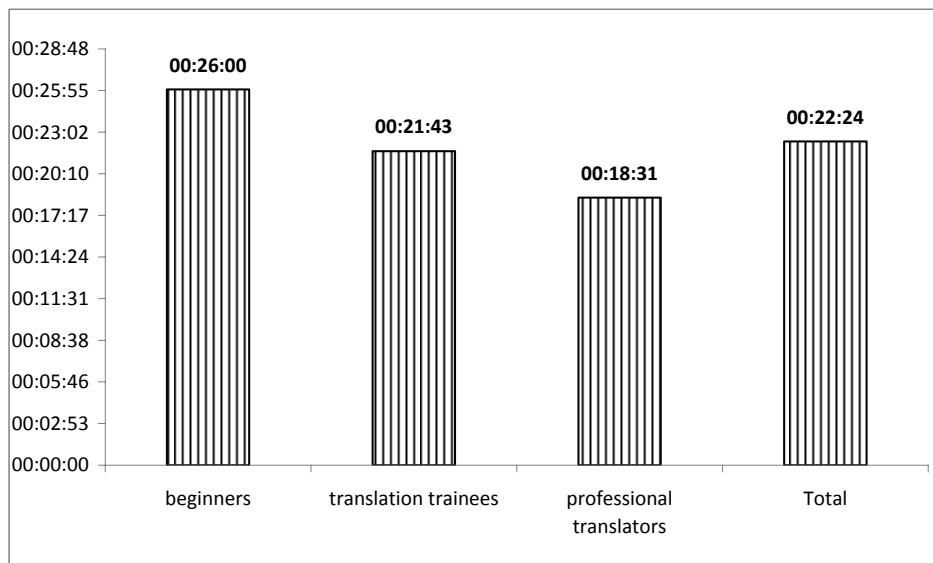
Needless to say, the number of subjects is small to expect statistical significance and the wide range of variation in each of the groups reduces the likelihood of statistically significant differences. The results offer more in the form of raw data and point to the differences with which all the subjects dealt with the same task. Since groups G1 and G2 are fairly homogenous in terms of age, language proficiency and translation experience (group G1 is equivalent to group 2BA described in detail and analyzed in chapter 6, the section on participants, whereas group G2 is equivalent to group 2MA in chapter 6 but with a structured exposure and practice in translation offered

in their Conference Interpreting programme), it is justified to assume that these differences originate rather in their general cognitive capacities than in the language proficiency domain. The variety in the duration data as such could, although much indirectly confirm the proposal of KIN, suggesting that the skill to translate relies on the individual's ability to integrate all the necessary knowledge and not only on the ability to activate one's bilingual knowledge. The group of practicing translators is the least homogenous in terms of age and length of practice, subject S1 has had 30 years of professional experience, S2 – 20 years of practice, S3 – 9, S4 – 4, S5 and S6 both have worked as translators for 4 years and S7 with S8 have been working as freelance translators for 1 year only. All the practicing translators were free lancers for whom translation is not the only source of income. Subjects S1 and S2 were self-taught translators and the remaining translators were graduates of the Conference Interpreting programme who also provide written translation services. Looking at the correlation between years of experience and the duration of the translation task for all individual translators reveals results which can be interpreted as supporting hypothesis 4.



Graph 2. Correlation between years of experience for practicing translators (PTE) and duration rounded to minutes.

The strength of the correlation is convincing and shows that with time and professional experience the process of translation takes less time which allows to infer that problem solving and decision making is less time consuming<sup>4</sup>. As the graph below shows if the two slowest translators with only one year as practicing translators are eliminated from group G3 the differences in terms of duration become more pronounced between the groups.



Graph 3. Statistics for the duration data without the two translators with 1 year of experience in group G3.

Clearly, the differences visible in graph 3 reflect the expectations about the role of experience and its impact on the speed of the actual translation process. The immediate question which arises is, ‘On what aspects of the translation process do translators with longer experience save time?’ Drawing from the comparative analysis of inexperienced and experienced translators presented in detail in chapter 5, the use of a dictionary seems the first candidate for extending the duration of the task at hand.

<sup>4</sup> This conclusion however is reached when the SL text was very simple. In the case of more complex texts experience does not necessarily mean a significantly faster translation process (see chapter 6).

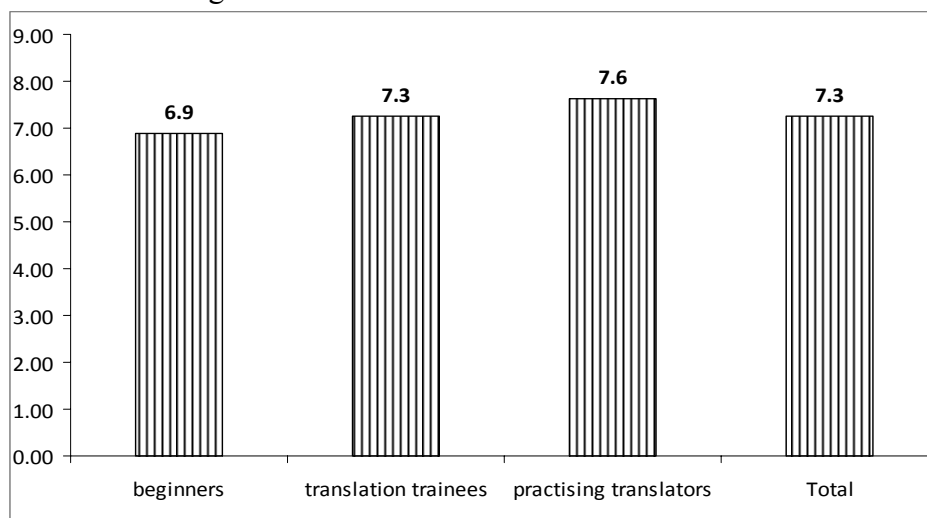
## 7.3.2. Duration and dictionary use

Table 2 below shows the number of dictionary/Internet searches for all the participants of the study.

Table 2. The use of external sources for individual subjects in the three groups.

Subject	G1	G2	G3
1	5	6	1
2	3	6	1
3	8	3	6
4	10	2	8
5	5	3	1
6	8	9	13
7	10	17	17
8	6	12	14

Similar to the data on duration the insight into raw data is essential as in terms of inferential statistics all the individual differences become invisible. What is more, graph 4 demonstrates that on average it is the group of practicing translators which scored the highest in terms of consulting dictionaries or using the Internet.

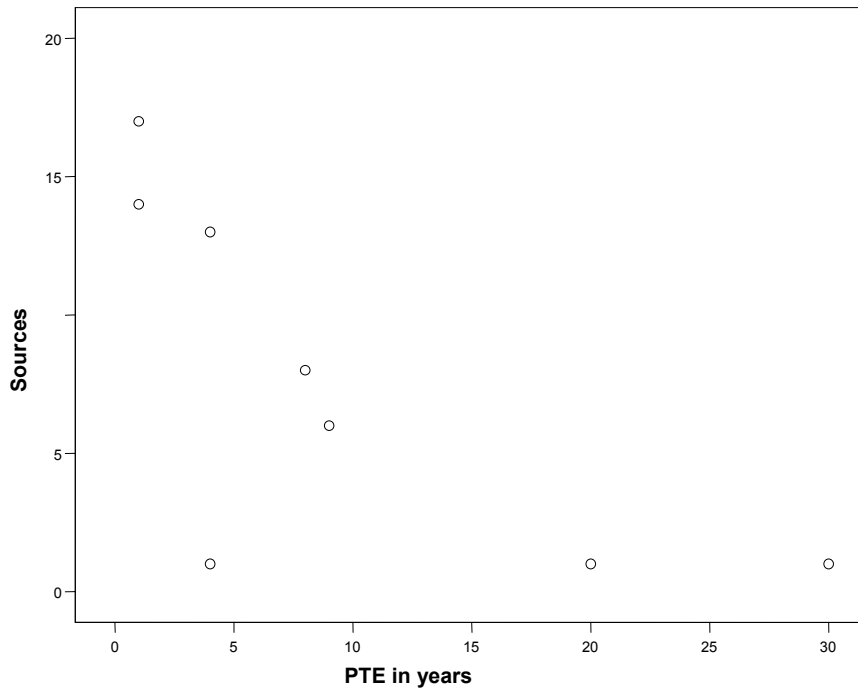


Graph 4. Statistics for consulting external sources.

The group of translation trainees (G2) on average used dictionaries also more frequently than the least experienced group (G1). It seems that such results show no correlation between language proficiency which obviously is much higher in groups G2 and G3 and translation skill. On the other hand, the results could demonstrate that with experience there is a greater awareness of the translation process and more concern for the quality of the final product. These issues are more important for those subjects who have been trained (or who self-developed their expertise) as translators. It is possible that the least experienced translators (group G1) are at the stage of unconscious incompetence (González Davies 2004) and their decisions are easier to make and more intuitive even if they run a high risk of making transfer errors or choosing contextually inappropriate TL words in their translations. Translation trainees have probably entered the stage of conscious competence and they feel a strong need to confirm their solutions and take every possible precaution to choose the best possible word which would match the text type, the context and the function the TL text is supposed to fulfil. It is also possible and significant for supporting hypothesis 3 that translation trainees and practicing translators with only one year of professional experience consciously create adequate KINs and therefore search for missing 'pieces' of their integrated networks in external resources, e.g., dictionaries or data bases. As it was pointed out in chapter 6 conscious language processing consumes a lot of time and a substantial amount of mental energy which will extend the translation process and create many distractions and disruptions when external sources are used. Two subjects S7 from groups G2 and G3 used external sources 17 times which considering the fact that the SL text was in their native language and its vocabulary was fairly simple is striking and points to the subjects' limited self-confidence. This is most likely not the result that would be expected although it can be justified by the trainees dedicated effort to do their best taking as much time as they feel needed on consulting external sources. The time and effort devoted to consulting external sources can be interpreted as their conscious attempt to create an adequate KIN (see chapter 5). Activating all the necessary knowledge is not possible without supplementing what is needed from outside their own memory store (cf. Tabakowska 2003, Stolze 2004) possibly combined with the need to find confirmation for their hunches and hypotheses due to low self-confidence on how to best solve the subsequent translation problems.

In contrast the most experienced translators S1 and S2 as well as S5 from group G3 used a dictionary only once to find the English equivalent of the low frequency word *tatarak*, in the title of Wajda's film. Clearly, there can be a range of reasons explaining the drop of dictionary use with growing experience in the profession. As it was suggested by practicing translators in the questionnaire study (see chapter 6), their mental lexicons continue to grow and collect detailed information about words (e.g., their grammatical behaviour, style, etc.) throughout their working life. They can also resort to automatic interlingual associations which have left memory traces which speed up lexical access and might give the impression of by-passing the conceptual base (see Paradis 2009). Possibly, though their activated and integrated knowledge (bilingual, interlingual, metalinguistic, pragmatic, intercultural, textual, domain specific, etc.) in the form of a specific KIN primes lexical access to the desired TL words. Thinking globally (in a top down manner), rather than locally (in a bottom up manner) individual words cease to cause problems since the same information can be frequently expressed in many different ways, of course with some exceptions, like in the case of *tatarak*, where external memory sources become indispensable. Clearly, however, there is more self-confidence and self-reliance in more experienced translators and the need to consult dictionaries and confirm solutions decreases with years of practice at least when it comes to the most frequently used store of vocabulary (cf. Bell's (1991) frequent lexis store or Gile's (2009) gravitational model). The proportion between reliance on internal memory and external memory use changes with practice possibly similar to what happens in the development of any other kind of expertise (see Hoffman 1997). Self-reliance is also a feature of systems intelligence discussed in chapter 5 which develops through interaction and feedback, which are consciously used by an expert learner (a developing translator) to improve future performance. In the case of the practicing translators who participated in the Translog study correlating the years of experience with the number of dictionary look ups shows a significant correlation depicted in Graph 5 below.



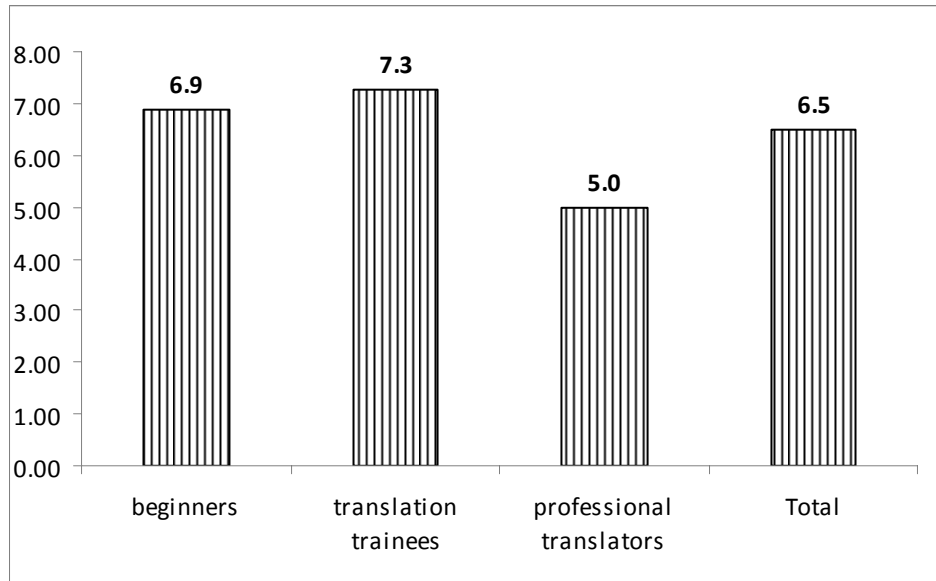


Graph 5. Correlation between years of experience for practicing translators (PTE) and the number of dictionary look-ups (sources).

When interpreting the above results, however it has to be remembered that the text used for the study was fairly simple and did not require the knowledge of specific terminology. The KIN which was created in the mind of an experienced translator could safely rely on the internal cognitive resources including the bilingual mental lexicon. If however, the text is more complex, more in the range described as ESP (English for Special Purposes), the translator would probably have to devote more time to create an adequate KIN and the use of external memory sources would be necessary, and it would consequently extend the time spent on the translation task. This was indicated by the practicing translators who responded to the questionnaire analyzed in chapter 6.

Looking at the data on dictionary use in the three groups of subjects it is interesting to see how the analysis changes if the two practicing translators with 1 year of work experience are removed from the statistical analysis. Similar to the manipulation done on the duration data, the differ-

ences between the three groups shown in Graph 6 are again more pronounced and more in line with expectations about the educating role of experience.



Graph 6. Statistics for consulting external sources without the two translators with 1 year of experience in G3.

The results demonstrated in Graph 6 show that with time the need to consult dictionaries drops with immediate effect on the duration of the translation task. It is interesting, however that the most frequent users of dictionaries are now the translation trainees. This result probably reflects the habit installed during training which aims to develop in future translators the need for checking and double checking (Tabakowska 2003). Therefore, the above results can be interpreted as positive and as such they only confirm that the trainees are consulting external resources with the right intention. For them it is not the speed that is the aim but the quality of the translation. They are most likely at the stage of conscious competence with limited self-confidence. Although, following the manipulation of data the differences are more visible, and more in line with expectations, they are still not significant in terms of statistics.

To sum up, the use of dictionaries and other external memory sources is responsible for extending the translation process. Each search takes time which as calculated by Translog can range from several seconds to two or three minutes. As it was observed in chapter 5, consulting external sources may also have a disruptive effect on the flow of the translation process for less experienced translators. Asadi and Séguinot (2005) noted that even their experienced subjects tended to make a typing error when after consulting a dictionary they returned to their translation pointing to the fact that the flow of language processing is disrupted by dictionary searches not only for less experienced translators. Nevertheless, the use of dictionaries or other sources is not the only factor responsible for the individual differences in the time taken to translate the SL text.

### 7.3.3. Duration and typing speed

The data available through Translog revealed another interesting relationship between the duration of the translation task and the overall keyboard activity marked as events per minute (EPM) and text production per minute (TPM), in other words the typing speed. Table 3 below shows the correlations between the duration and EPM as well as between the duration and TPM calculated for the slowest and the fastest translators from each group.

Table 3. The correlations between the duration and EPM and TPM calculated for the slowest and the fastest translators from groups G1, G2, G3.

<b>Correlations</b>		
		duration
EPM	Pearson Correlation	-,941(**)
	Sig. (2-tailed)	0,005
	N	6
TPM	Pearson Correlation	-,922(**)
	Sig. (2-tailed)	0,009
	N	6

**\*\*.** Correlation is significant at the 0.01 level (2-tailed).

As it can be inferred from the strength of the correlations typing speed is an important factor influencing the duration of the entire translation task. This correlation might seem so blatantly obvious that it has, at least to my knowledge, been left out by investigators of the translation proc-

ess. Yet, its significance deserves attention and raises several questions: ‘Is the slow typing speed determined by poor typing skills?’, or: ‘Is it determined by slow language processing in the translator’s mind? These questions are not easy to answer. Do people generally type faster in their native language than in their foreign language? Are typing skills taught at schools or self-acquired? Is it only typing skills or general computer skills that had an impact on the speed of the translation performed by my subjects? Or ultimately, has the typing speed been determined by the task of translating to such an extent that even those subjects who have decent typing skills took much longer to solve problems and make decisions? A section of two Translog files produced by the slowest and the fastest translator from group G3 might illustrate the point. Subject S8 while translating the following sentence from Polish: *W ten sposób obie kobiety – Krystyna i Marta – zlewają się w jedną głęboko zranioną istotę, która musi znaleźć w sobie siłę i poradzić sobie z perspektywą nieuniknionej śmierci* took a significant amount of time with marked time delays, two instances of dictionary use (indicated by letter ‘B/I’) and a certain amount of erased text.

#### S8 (G3) Translog file

```
This♦way♦both♦♦women♦♦merge♦into♦one♦[*23.434] ☒☒☒☒☒☒☒
☒☒☒☒☒☒☒☒☒blend♦into♦♦♦[~] ♦B♦[~] ♦♦♦one♦,♦de♦e♦
☒☒☒☒☒☒♦deeply♦wounded♦♦♦♦person♦♦♦♦,♦who♦must♦♦♦♦
♦♦♦♦♦[*25.152]pluck♦up♦the♦strength♦[*59.305] ☒☒☒☒
☒☒☒☒☒☒☒☒☒♦strenght♦I[*10.064]♦to♦♦♦♦♦battle♦the
♦[*25.556]prospect♦of♦♦♦♦♦♦♦[~]♦♦B[*15.939] [~]inescapab
le♦death.
```

The same sentence when translated by a practicing translator with 30 years of experience left the following record in the Translog file:

#### S1 (G3) Translog file

```
In♦this♦way♦both♦women♦,♦Krysyt☒☒tyna♦and♦Marta♦,♦bond♦into
♦one♦deeply♦hurt♦being♦,♦which♦must♦find♦♦♦strength♦♦♦♦
in♦itself♦and♦cope♦with♦the♦prospect♦of♦♦i☒♦♦♦♦♦uh☒nav
oidable♦death.
```

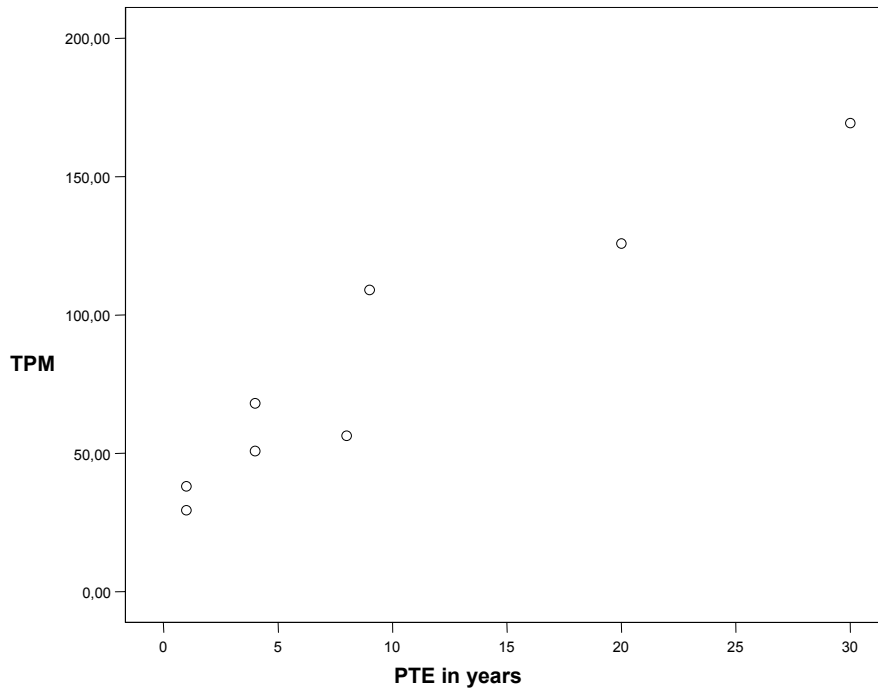
Clearly there is no marked time delay apart from 1 to 3 seconds between typing single words of the TL text. Such pauses then are only an indicator of motor processes, e.g., typing ability (see Rothe-Neves 2003), there is no time taken for consulting dictionaries and there is a scant amount of erased text. In the last line there is a five second pause following letter 'i' which was quickly erased. In psycholinguistic terms one can speculate that the translator possibly made a quick decision and rejected the word 'inevitable' as a competing equivalent to 'unavoidable' or realized a potential spelling/grammatical mistake, or suppressed language interference. This possible explanation confirms Jakobsen's (2006) comment about the extent to which one can infer mental language processing in the translation process using Translog data. Obviously at the fine-grained level many questions will still remain open as to what actually goes on in the translating mind. At the coarse-grain level, however, it seems that the differences recorded in the Translog files of subject S1 and S8 point to the differences in the language processing of both translators. For the translation trainee the duration is extended by the pauses in between the actual typing of the TL words. Buchweitz and Alves (2006) noted that this difference points to differences in the segmentation of the SL text into translation units and they reported that with more experience there is significantly less segmentation and the translation units become larger in size (see also Jakobsen 2002, Dimitrova 2005). Buchweitz and Alves (2006: 248) came up with an interesting idea of 'cognitive rhythm' of the translator. The individual cognitive rhythm can range from a word to a phrase or a full sentence which is processed as a single translation unit uninterrupted by pauses longer than 3-5 seconds. The example above seems to lend support to the above suggestion. It is therefore justified to infer that with growing experience in interlingual transfer of meaning the time to make decisions is reduced possibly because of the ability to integrate all the knowledge including proceduralised knowledge underlying a range of skills (e.g., typing/computer skills are then a part of the translation skill as well) needed to perform the task efficiently in terms of time. The fairly smooth, virtually uninterrupted fluent typing of the TL text by the most experienced translator is most probably carried out under metacognitive supervision which allows to process larger stretches of the SL text as single translation units. Less experienced translators work on smaller units and frequently do not synchronize their choices (i.e., lexical searches) with metacognitive supervi-

sion and consequently they lack the guiding direction in their translation process and face too much uncertainty which they try to dispel by consulting dictionaries. Holmes (1988) would say that they lack a macro-strategy, their mental map of the TL text which is sketched out while they read the SL text for translation. I would like to add that they could have envisaged the mental map of their TL text if they had created an adequate KIN. Hönig (1991) further explained that inexperienced translators try to compensate for their lack of macro-strategy employing micro-strategies which frequently lead them into rule-governed use of language, which sometimes makes them oblivious to the rules of discourse grammar and the choices they make seem unnatural and out of place, like 'to pluck up the strength' or 'to battle the prospect' (see the S8 (G3) Translog file sample). Kussmaul (1991) noted a similar tendency when investigating creative thinking in translation. His subjects who were translation students seemed very creative initially but when it came to writing down their translations they frequently abandoned their creative choices (possibly an outcome of their unstable KIN) for the rule-governed linguistic choices as if they were afraid of taking liberty and preferred to play safe. Most likely, there is a problem of confidence, a sign of still feeling inadequately in control of the L2 grammar and lexis which slows down the fluency of thinking and limits the flexibility of strategic choices. Guy Cook (1991: 128) pointed out that inexperienced translators who are frequently also inexperienced L2 users are determined to search for fixed meaning and are devoted to find exact words which in their opinion are perfect equivalents. Experienced L2 users (e.g., practicing translators) are on the other hand more tolerant of the indeterminacy of meaning and consequently have a wider choice of TL means. If they had created an adequate KIN their choices are predetermined and the priming effect facilitates lexical access and the risk of inappropriate choice either semantically or pragmatically is much lower (see chapter 2 on lexical access). The tempo and fluency of decisions made by the translator with 30 years of experience not only points to more self-trust but it also demonstrates the division of labour according to which many actions have been automatized (e.g., typing skill, lexical access, self-monitoring, on-line revision, self-correction) while others, if need be, might be carried out in a consciously controlled manner without the danger of cognitive overload. All the actions though are run under metacognitive supervision which in turn, as it was demonstrated in

chapter 5 relies on the KIN created for the task at hand. It is possible to assume that an adequate KIN will decide about the ratio between automatic and controlled processing. The more automatic and fluent the translation process appears to be the more cognitive capacity remains available for metacognitive supervision. In effect the translation task takes less time and runs a higher chance of meeting professional standards of quality.

In simple terms the translator knows if the SL text is more or less demanding and consequently if it will require extra effort to create an adequate KIN. This assumption was confirmed by the questionnaire study as well (see chapter 6). In the case of the SL text used in Study 1, the professional translator with 30 years of experience was probably relying on fairly automatic interlingual associations. However, as it is demonstrated by the longest pause of 5 seconds in the last line of the Translog file (subject S1 G3 showed above), the metacognitive supervision is switched on all the time keeping all the knowledge integrated in the KIN and ready to supply feedback when the need arises. In this case the translator probably spotted a potential spelling mistake and erased the potential erroneous 'inavoidable' changing it to 'unavoidable' after a 5 second pause. The time was probably used to recall the proper spelling from memory or for rejecting a competing equivalent (inevitable) as less adequate. It seems that the metacognitive supervision is scrutinizing other automatic or semi-automatic actions which are performed at the same time, e.g., reading the SL text, accessing TL vocabulary and grammatical patterns, typing the TL text and revising the emerging TL text as adequately representing the SL text. In this way the professional experienced translator is like Donald's (2007b: 75) piano player who although focused on his/her interpretation of the entire piece will nevertheless notice a problem at the lower level of the actual production and eradicate it at once, if possible.

A further insight into the relationship between TPM and the duration of the task is offered by correlating the TPM and the years of experience in translation calculated for the subjects from group G3. The graph below shows that the more experience in providing translation services the highest the TPM for each subject.



Graph 7. Correlation between TPM and years of experience (PTE).

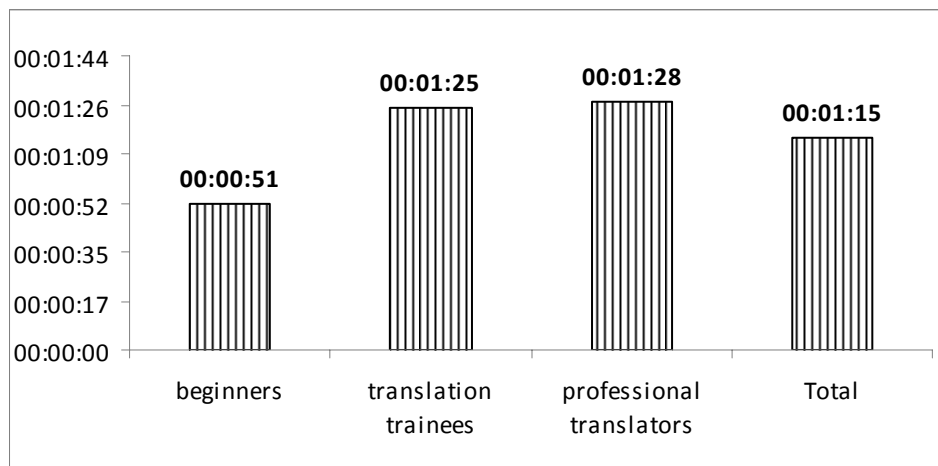
The strength of the correlation is significant (see Table 7 for significant correlations) and points to the benefits of the length of practice. The time needed for performing the same translation task decreased with experience not only because of not feeling the need to consult dictionaries but because of the internal self-confidence in making the right decisions which allows for smooth language processing, which in turn is reflected in the fast typing of the TL text. It is plausible that the fast language processing is achieved due to the growing ability to integrate knowledge (and skills) into an adequate knowledge integration network (KIN) needed for the task at hand.

So far I have focused on the duration and two factors which affect the duration with a considerable strength. Bearing in mind, however that the translation process is multilayered and involves multi-tasking including both comprehension and production processes, the next question refers to how the remaining time (excluding dictionary consultation discussed earlier) is distributed throughout the task.



### 7.3.4. Distribution of the remaining time in the translation process

Having assumed in chapter 5 that the KIN for a specific translation task is created during the first reading of the SL text and it is further dynamically readjusted as the translation proceeds, I wanted to measure how much time was taken by each subject before the actual onset of the TL text production. As it is demonstrated by graph 8, the beginners (G1) took the least amount of time before they started to type their translations.



Graph 8. Time prior to the onset of translation for the three groups of subjects.

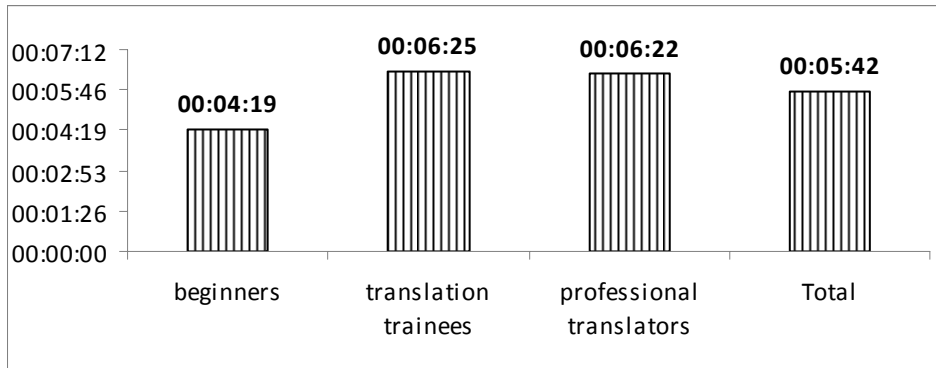
On average 51 seconds were devoted by the beginners in translation to read the SL text, and acting on the hypothetical assumptions laid out in chapter 5, to create a KIN for the task at hand. The translation trainees group spent on average 1 minute 25 seconds and the most experienced group took only slightly longer 1 minute 28 seconds. The average scores however, just as it was with the previous aspects discussed above blur individual differences which are important because translation is always an individually performed activity. The table below shows raw data on the time taken by individual subjects before the onset of the TL text production.

Table 4. Time prior to the onset of translation for each subject.

Subject	G1	G2	G3
1	00:06.066	00:25.442	01:19.910
2	00:30.803	00:30.707	01:12.550
3	01:08.376	00:11.763	00:25.442
4	01:20.854	01:59.112	04:01.829
5	00:58.853	02:52.461	00:36.385
6	00:51.829	01:53.547	00:53.685
7	01:00.323	01:40.746	02:21.836
8	00:59.371	01:50.326	00:54.189

Subject S1 from group G1 took the least time, about 6 seconds which is clearly enough to glance at the SL text but probably not enough to read it with comprehension which will necessarily activate relevant knowledge structures (Sperber and Wilson 1986, Stolze 2004, Donald 2007b) to create an adequate KIN for the translation task ahead. Subject S1 from group G3 took nearly 1 minute 20 seconds (about 16% of the entire duration of the translation process which lasted 7:49.390) before the onset of translation and although from that time 47 seconds 668 milliseconds were used to find the equivalent of the Polish word *tatarak*, the time was probably sufficient to position the SL text (Stolze 2004) and create an adequate KIN. It seems possible that the time invested in creating a KIN will pay off later on in smooth and fluent translation. The results confirm the differences between inexperienced and experienced translators with respect to how they approach the SL text (see chapter 5), although as the table above shows there are significant idiosyncratic differences between the subjects within each group.

Since another pronounced difference between the inexperienced and experienced translators is the time taken for post-draft revision, I also measured the time subjects took to revise their first drafts. The graph below shows that indeed the beginners spent the least time revising their first draft.



Graph 9. Time for post-draft revision in the three groups.

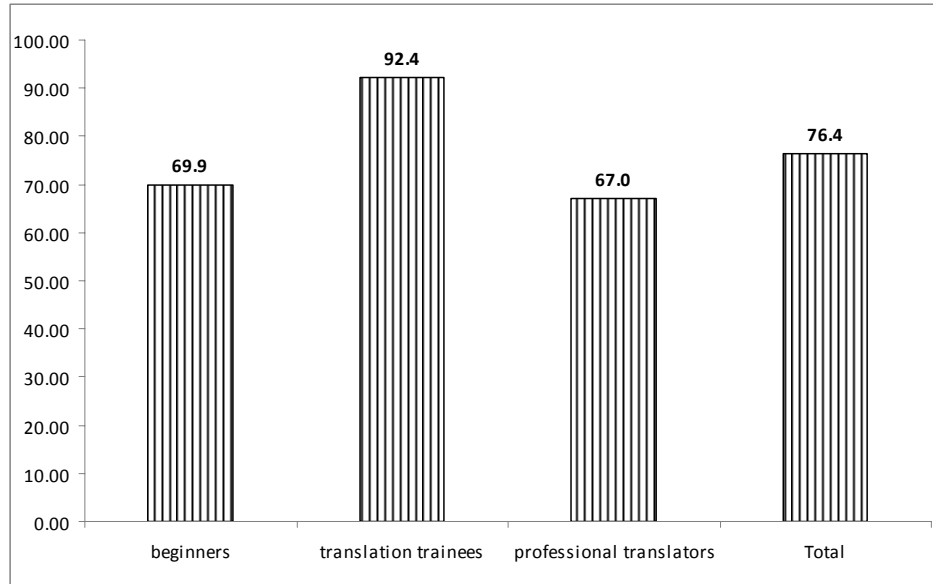
The group G2, the trainees took the longest and the practicing translators were only 3 milliseconds behind. Again, it seems essential to look at raw data not to allow generalizations to obscure the actual issue under discussion, the time for revision. The table below shows surprising individual differences. The two most experienced translators who have been in the profession for 20 (S2) and 30 (S1) years took the least time to revise their translations. Both of them, however, made a comment that they usually leave the first draft and revise it later. This approach to post-draft revision was confirmed by the practicing translators discussed in the questionnaire study in chapter 6. The raw data confirm the results obtained from the questionnaire study in which a clear majority of 87.5% practicing translators said that they leave the translation before revising it. The raw empirical data obtained from the Translog files lend further support to the hypothesized need to re-frame the KIN before the final revision of the TL text (Table 5).

Table 5. Time spent on post-draft revision for individual subjects.

Subject	G1	G2	G3
1	02:18.505	02:41.864	00:06.397
2	03:11.639	03:04.807	00:12.549
3	05:42.210	06:34.091	02:41.864
4	06:20.172	04:37.207	03:08.447
5	02:26.727	05:24.281	09:25.971
6	05:41.723	11:28.934	13:56.215
7	04:23.490	06:20.279	03:27.396
8	04:35.201	11:14.901	17:59.194

It is therefore plausible that translators feel the need to re-frame themselves, refresh their mind before they can comfortably check and improve their translation. It is however, also possible that the need to abandon the KIN created for the purpose of translating the SL text before they can efficiently revise their translations has important psycholinguistic consequences for the revision process. Time delays before revising a TL text allow to inhibit the SL (see chapter 2 on language control) at least by eliminating the recency effect on lexical access as if in the common saying ‘out of sight, out of mind’. Following this line of reasoning and focusing on self-revision, I am more inclined to suggest that the two tasks, translating and revising require some changes in the Knowledge Integration Network (KIN). It is likely that re-framing from the KIN which was created for the purpose of translating a given text to a KIN needed to revise the TL text is most efficient with a time break between the two tasks. The time delay usually filled with different experiences erases the KIN created for the actual translation task and allows to gain an objective distance to both the SL text and the TL text produced in the translation process. This possibility is confirmed by Hansen (2008) who suggested that translation competence and revision competence are in fact different sets of competences as they require different skills.

The individual differences within each group are the most striking in group G3 where they range from 6 seconds to nearly 18 minutes taken by the translator with only one year of professional experience. The most natural question which follows is, ‘What is the time used for when translators revise their work?’. The Translog program allows for analysing not only the whole TL text production process, but it also allows to analyse a chosen section of the process. It therefore allows to measure not only the time spent on the post-draft revision but it shows the actual text production during that time which in turn indicates how many changes were introduced during revision. Graph 10 shows that group G2, the translation trainees introduced the most changes which are indicated by the number of keystrokes during the time spent on revising the draft translation.

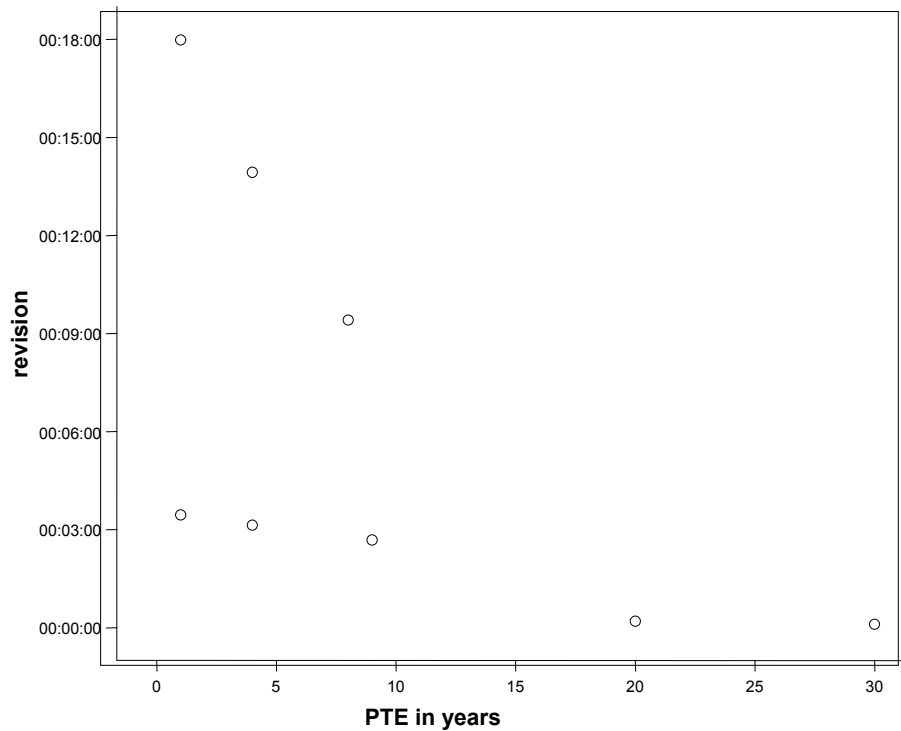


Graph 10. Text production during post-draft revision.

With respect to the number of changes introduced during the revision beginners were similar to the practicing translators and much less likely to change their initial solutions. This result is consistent with Jakobsen (2002) and Alves (2005) who concluded their studies by claiming that the more experienced translators produce ‘more durable texts’. The raw data in Table 6 however explains how superficial the statistical similarity in fact is.

Table 6. Text production during post-draft revision for individual subjects.

Subject	G1	G2	G3
S1	4	84	0
S2	27	42	0
S3	79	126	84
S4	83	64	7
S5	256	24	124
S6	27	145	118
S7	43	36	85
S8	40	218	118



Graph 11. The correlation between years of experience as practicing translators (PTE) and revision.

In each group there are pronounced differences between individual subjects which disappear when average numbers are calculated by inferential statistics. These individual differences in Group G3 where the two most experienced translators did not carry out their revision at all, postponing it as it is their usual procedure until later affected the strength of the correlation between revision and years of practice. See graph 11.

As it is demonstrated in table 7 which summarizes the correlation between years of experience as practicing translators (PTE) and text processing features discussed so far, the correlation between the time taken to revise the text and years of experience is not as strong as the correlations between the duration, dictionary use and text production per minute.

Table 7. Significant correlations between years of experience (PTE) and text processing features.

		PTE in years
duration	Pearson Correlation	-,803(*)
	Sig. (2-tailed)	0,016
	N	8
TPM	Pearson Correlation	,950(**)
	Sig. (2-tailed)	0,000
	N	8
Sources	Pearson Correlation	-,716(*)
	Sig. (2-tailed)	0,046
	N	8
revision	Pearson Correlation	-0,613
	Sig. (2-tailed)	0,106
	N	8

\*. Correlation is significant at the 0.05 level (2-tailed).

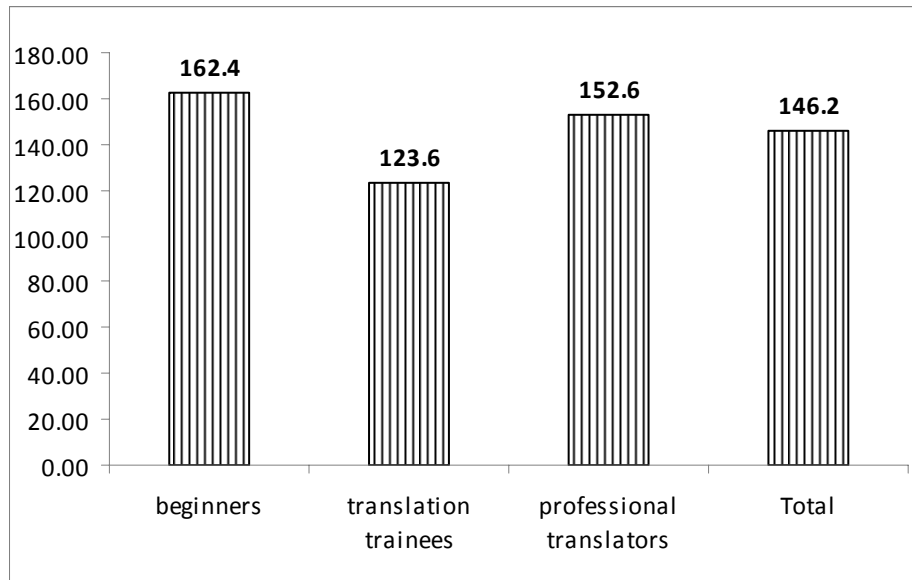
\*\*. Correlation is significant at the 0.01 level (2-tailed).

There is, however another interpretation which is possible here. As observed by Buchweitz and Alves (2006: 263), the amount of revision can be used to infer to what extent the translators are “satisfied with their work once they get to the last word”. In this sense it is possible that both most experienced practicing translators were fully satisfied with their work so far whereas the less experienced kept revising taking a considerable amount of time and introducing a lot of changes in the hope that through their conscious effort they will produce a more adequate translation. With all respect to their conscientious approach it seems that the trainees are still in the process of developing their self-confidence not only as translators but also as L2 users. In other words, another possible explanation comes from the declarative procedural divide between their L1 linguistic competence and their L2 use which has to be surmounted in the translation process as a consciously controlled metalinguistic operation involving transporting meaning across language barriers. Care has to be put into not losing something essential on the way (see Whyatt 2007a) as well as to deliver the contents in an appropriate presentable form for TL readers. This requires applying metalinguistic knowledge, pragmatic knowledge and intercultural awareness as well as linguistic competence. In short, revising also requires integrating knowledge but

with different weightings attached to bring the receiver of the translation in focus and to make sure that the translation will fit in with the TL reality it will enter as soon as the finished product is sent to the client. Emma Wagner (see Chesterman and Wagner 2002) gives some insight into the strategies applied by professional translators working for the EU translation services to distance themselves from their translations and perform an efficient post-draft revision. Some of them include, for example sitting in a different chair when revising, or looking at a print out of the translation rather than revising on the computer screen.

Having devoted some attention to the distribution of time following the actual end of the TL draft translation the revision aspect has not as yet been exhausted. Bearing in mind the discussion on different revising strategies (see chapter 5) it is important to analyze the so-called on-line revision which will take into account all the changes during the TL text production calculated by text elimination data as well as, what can be referred to as navigation within the TL text. Navigation within the text is indicated by cursor and mouse movement during the actual typing of the TL text. Buchweitz and Alves (2006) referred to what I call navigation within the text using the term recursiveness which they explained as the on-line revision of the text. All the features indicating movement within the TL text show that translation is a non-linear process. Many practicing translators would probably agree with Séguinot (1996) who observed that even if the translator finds a solution his/her mind might continue the search for a better solution and the changes are immediately introduced within the emerging TL text. Indeed, the study of the translation process frequently shows signs of parallel processing when the translator works on more aspects or items at a time (see Lauffer 2002: 70) and will move up and down within the TL text to introduce changes which are aimed to improve the TL text under production. This can be interpreted as yet another sign of the on-line metacognitive supervision over the translation process which draws an insight from the Knowledge Integration Network created for the translation task. Graph 12 below shows the data for text elimination in all the groups of subjects.

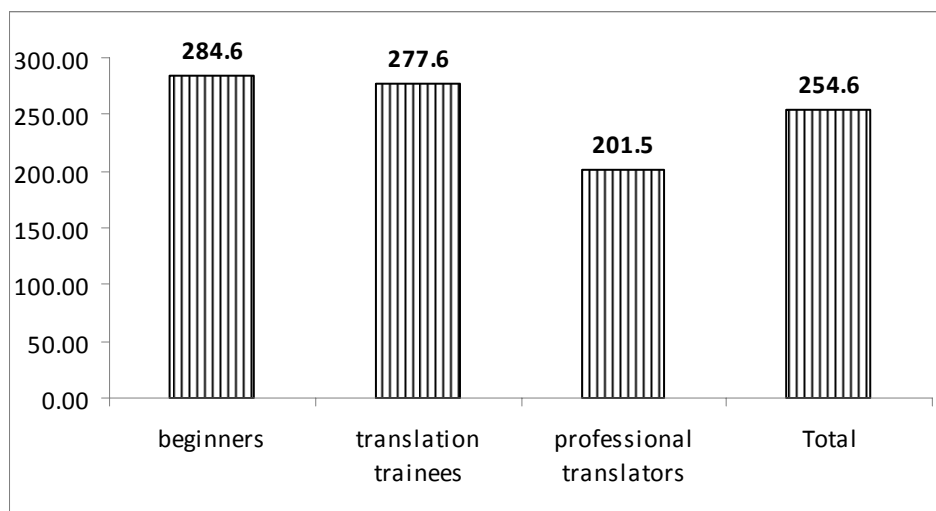




Graph 12. Text elimination in the three groups of subjects.

It is the group of beginners (G1) which was most active in terms of text elimination whereas the group of translation trainees was the least active in terms of text elimination during the TL text production. On the other hand, it was the group G2 which devoted the largest amount of time on post-draft revision as well as introduced the most changes at the post-draft revision stage. It is interesting to note the similarity between the beginners and practicing translators in terms of the eliminated text and text production during revision. It seems possible that the significant amount of time devoted to changes in the post-draft revision by trainees is the transfer of training effect when students are repeatedly reminded about revising and improving their translations. Consequently, it seems that they perform less on-line revision focusing on the completion of the first draft which they will later revise taking as much time as they feel necessary. Beginners in translation frequently change their mind while typing their first draft possibly for two reasons; the first one being that they don't have enough communicative confidence in L2 (see Whyatt 2009a) or they aim at the best possible solution while drafting their translation. The second possibility is confirmed by the fact that they rarely revise their finished translation showing low level awareness of translation as a purposeful process and a functional product.

The further data on cursor and mouse movement show that the groups G1 and G2 move within the text more than the group G3 which seems focused on progression towards the end of the task. Graph 13 below indicates that both the beginners and the translation trainees exhibit a lot of recursiveness which Buchwietz and Alves (2006: 246) described as, “a process that at times, goes around in circles, without moving linearly forward”.



Graph 13. Cursor and mouse movement for the three groups of subjects.

The data showing that the more experienced translators exhibit the least movement within the text point to the amount of self-confidence in their decisions which as it was theoretically assumed stems from their ability to integrate all the knowledge relevant for their metacognitive supervision which guides their subsequent decisions. As suggested in chapter 5 having created an adequate KIN the semantic priming effect facilitates lexical access to the point that well experienced translators seem set on word choices while typing the TL text and they rarely change their mind. Below, there are samples of Translog files from representatives of the three groups when the subjects were translating the same stretch of the SL text:

*Marta (Krystyna Janda) jest żoną doktora (Jan Englert) z małego miasteczka. Pewnego dnia Marta poznaje znacznie młodszego od siebie mężczyznę, prostego robotnika Bogusia (Paweł Szajda), który oczarowuje ją*





role in the revision process. The ability to distance oneself from one's own translation and observe with the fresh eyes of a reviser, editor and proof-reader one's own creation (TL text) seems a difficult skill to grasp yet an essential part of translation expertise. The reason for this difficulty lies probably in the parallel development of translation expertise and bilingual communicative competence. Inexperienced translators who are frequent research subjects are also inexperienced L2 users who focus on controlling their L2 rather than the translation process with no capacity left for the metalinguistic distance to the emerging TL text. As indicated before, translation experience raises the metalinguistic awareness and by putting one's bilingual knowledge to the test enhances the communicative competence in both L1 and L2. Consequently, when some L2 learners/users choose to pursue a career in language translation and embark on a translator training programme they frequently become overcautious and devoted to lengthy revising to ensure the adequate rendition of the SL text. Their translation behaviour is strategic and consciously controlled and so is their language use. Although the attitude is correct and appropriate for the stage on the developmental continuum of their translation expertise their choices and final decisions frequently lack creativity in language use. Practicing translators with many years of experience have automatized a lot of language processing freeing in this way sufficient mental resources to provide efficient metacognitive supervision over the translation process, which as suggested in chapter 5 relies on the integrated knowledge network (KIN) created for the translation task. Their metalinguistic abilities play an important part in how the supervision contributes to the speed and fluency of the TL text production. The results observed in this study referring to on-line and post-draft revision and navigation within the text further confirm that the role of metalinguistic and metacognitive abilities requires further investigation.

Having discussed so far all the aspects of the translation process in which beginners, trainees and practitioners differ, it might seem disappointing to report that the differences between the three groups do not reach statistical significance. Graph 14 (see Appendix 1) shows the results of significant tests carried out with the analysis of variance (ANOVA).

The lack of significant differences between the groups of beginners (G1), translation trainees (G2) and practicing translators (G3) can possibly be explained by two factors: a small number of subjects in each group (N8) and lack of homogeneity in group G3. However, the results showing

no significant differences are by no means disappointing but on the contrary they point to some important findings. First of all, it is possible to confirm that the relationship between the human skill to translate and the level of L2 proficiency is not strong enough to decide about the translation performance features which were analyzed in this study. This view is supported by the wide range of different results within each group of subjects, also those which were fairly homogenous in terms of translation experience and L2 proficiency, G1 and G2. The individual differences were the most pronounced within the group of practicing translators which was the least homogenous in terms of translation experience and consequently in terms of their bilingual knowledge including L2 proficiency, lexical access and bilingual language control. For example, in terms of duration the range was from 07:49.390 to 49:23.292, in terms of time prior to the onset of translation the range was from 00:06.066 to 04:01.829, in terms of post-draft revision 00:06.397 to 17:59.194 and in terms of changes introduced during post-draft revision the range was from 0 – 256 keystrokes. Further, in terms of text elimination calculated in signs the range was from 47 to – 345 signs and in terms of navigation within the TL text the subjects performed movements ranging from 20 – 1,442. In view of the above wealth of idiosyncratic differences between the subjects the decisive factor in the development of translation expertise might be the subjects' ability to build an adequate KIN in which bilingual knowledge plays an essential but not a decisive part.

Considering the significant correlations between years of experience and duration and the use of external sources and text production per minute, the role of experience is confirmed in terms of the speed of language processing in the translation process. What do translators learn from experience? It is possible to suggest that the experience of translation brings about a reorganization of the translators' ability to use (activate and integrate) their knowledge structures (including their bilingual knowledge) to create adequate knowledge integration networks (KINs). In consequence of the repeated translation experience it is likely that a process of transformation from a bilingual into an interlingual individual takes place (see Grosjean 2002) within a developing translator. Perceived as an expert learner and as a systems intelligent individual the translator learns to effectively and efficiently interact with the two linguistic systems (see chapter 5). Growing translation expertise while relying on knowledge integration results in the development of the interlingual capacity (Toury 1995,

Presas 2000), the ability to assess similarities and differences between the two working languages perceived not only as systems of knowledge but as social practice shared by the language users.

To sum up, the results of Study 1 tentatively confirm the hypothesized role of the translator's ability to integrate knowledge for the task at hand. The ability to integrate knowledge in a dynamic Knowledge Integration Network (KIN) plays an important role in the evolution of translation as a human skill. The key issue here lies in the activation of the translator's internal mental library so that all the knowledge recognized by KIN as kin to the task at hand can be ready for use when translating (see Paradis 2004, Heredia and Brown 2004, Jakobsen 2005). KIN establishes parameters for the metacognitive control of actions when translators plan – execute – and rehearse their performance (Bell, 1991, Donald 2007b), KIN operates on the conceptual level (CUCB Paradis 2007, Kesckes and Papp 2000, Pavlenko 2005), and results in a temporary functional linkage between the two languages at all levels of language use. Building a KIN in the act of translating has a positive effect on the speed of the translation process and most likely on the quality of translation as a final product, although the quality of the product was not an object of analysis in this study. Novice translators integrate only parts of knowledge (i.e., the lexical level) and the speed and quality suffer. Translators beginning their professional life make a conscious effort to integrate knowledge which extends the time of translation and calls for the extensive use of external sources. To conclude, Study 1 provided evidence for the 4 hypotheses formulated for the purpose of this study.

- 1) The ability to integrate knowledge for the purpose of a translation task develops with experience as confirmed by the correlation between years of experience and text processing features (duration, consulting external memory sources and text production per minute).
- 2) The least experienced translators (G1) seem to have integrated only part of the knowledge required for the translation task (i.e., only their bilingual knowledge and more specifically their L2 lexical knowledge). They possibly translated without the support of an adequate Knowledge Integration Network (KIN) which slowed down the translation process and resulted in frequent interruptions because of low L2 proficiency.

3) The more experienced translators (G2) seemed to have made a conscious effort to build an adequate KIN which extended the translation process and resulted in conscious metacognitive supervision with frequent checking for confirmation to ensure adequate translation. Their extensive revision is of particular interest and shows their growing awareness of the translation process and care for the quality of their translation product.

4) Practicing translators with many years of experience seem to automatically integrate knowledge needed for the task at hand which speeds up the translation process and makes it more fluent. Significant differences in the distribution of the text processing features between the translators with only one year in the profession and those with longer working experience point to the developmental nature of the ability to integrate knowledge and apply a Knowledge Integration Network in the translation process.

Although the evidence is by no means strong and was not confirmed by inferential statistical analysis due to the small number of subjects and a wide range of idiosyncratic differences in the performance of subjects from the three groups, it nevertheless provides empirical evidence for the developmental nature of the human ability to translate. It can be tentatively concluded that translation expertise is based on the growing ability to integrate knowledge into active knowledge networks used for metacognitive supervision of the translation process leading to translation as a functional product. However, the development of translation expertise has to be viewed as parallel to and interconnected with the development of expertise in L2 communicative competence including also the metalinguistic abilities. More questions arise. If the development of translation competence is basically a process of learning to integrate knowledge (bilingual, intercultural, conceptual) then one could expect that inexperienced translators could perform better if they were told to make a conscious effort to build a KIN before they translate a given text.

A further step to take is then to experimentally test if leading the translator to create a KIN for a specific translation task would influence the translation performance to a significant extent. This purpose was pursued in Study 2.



#### 7.4. Study 2 – objectives, participants, procedure

The major objective of Study 2 was to further test the hypothesis that creating an adequate KIN will have a positive impact on the translation performance of translators with short experience in translation. Following the tentative conclusions from chapter 6 and Study 1 that the ability to integrate knowledge for the purpose of translation constitutes an important part of translation expertise an experiment was designed to test if an experimentally induced KIN in the least experienced group of translators will have a significant effect on the text processing features in their translation performance. The subjects chosen for the experiment were 2BA students of English as a foreign language who represented the same level of L2 proficiency and translation experience as the group G1 in Study 1 and group 2BA in the questionnaire study discussed in chapter 6 (see chapter 6 for more details about the 2BA subjects). The choice of participants was made not only for the pragmatic ease of recruiting such subjects, but also because they are the least likely to automatically create complete KINs as it was demonstrated by Study 1. Translation trainees (G2) as well as the newly employed translators make a conscious effort to integrate knowledge as they have been taught to do so (cf. Levy's metaphor of text as a picture of reality, macro-level text analysis (Nord 1988/1991), etc.). Well experienced practitioners create KINs automatically and possibly with the first encounter with the SL text and the translation brief. This time a much larger sample was chosen to heighten the chances for statistically significant results. Altogether 48 subjects took part in the experiment.

The group of 48 subjects who were fairly matched in terms of age, translation experience and L2 proficiency was randomly divided into two experimental groups: the KIN group and the NO KIN. Both groups consisting of 24 subjects were asked to translate the same text, which following the same text type as the one used in Study 1 was a film review, of *The Legend of Zorro*. The text of the review consisting of 131 words was taken from a popular TV magazine and the translation brief instructed the subjects to translate the review for an electronic English language version of the TV paper. Both groups translated the SL text in the Translog user program which recorded the translation performance just as it was the case in Study 1.

The major difference between the two groups was an artificially induced KIN for the KIN group (N24) and lack of this manipulation for the NO KIN group of subjects (N24). The KIN group was told that after they click start

logging they will see the SL text which they should read but before they start translating it, they will be asked to answer 10 questions referring to the text. The questions were typed on a piece of paper and the subjects were asked to look at them after they have read the SL text and provide brief answers. The following questions were prepared for the subjects in the KIN group:

1. Is the story of Zorro familiar to you?
2. Have you seen the film?
3. Where is the film set?
4. What category does the film belong to?
5. Give a few words to describe the story:
6. Is the story of Zorro universal?
7. Give two names of similar fictitious characters:
8. In the most general terms who is fighting against whom?
9. Give three words to describe Zorro:
10. Finish the sentence in 3-4 words: 'When I think about Zorro I can see...

The 10 questions were very simple and answering them the subjects had to refer to their own prior experiences, judgments and ideas about the film and its hero, Zorro. What is important however, is the fact that the questions were in English, the target language (the language into which the text will be translated) and the subjects' answers were also expected to be in English. None of the subjects seemed to be surprised that the SL text was in Polish and the questions referring to the text were in English which shows that switching languages is a natural occurrence for EFL students. The choice of language in which the questions were prepared was not accidental but intentional and aimed at helping the subjects to activate, integrate and initially recode their non-verbal knowledge about the film and the hero into English with the hope that through this an adequate Knowledge Integration Network will be initially created. This as hypothesized in chapter 5 should result in semantic priming by activating adequate concepts and sending spreading activation down to the TL lexical level.

#### 7.5. Study 2 – data analysis

The analysis of the data focused on the text processing features available through Translog. The comparative analysis aimed at finding confirmation to the hypothesis that creating a KIN prior to the onset of translation will have a positive effect for the translation process. Following the questionnaire study

and the results of Study 1, it was expected that the translation process for the subjects belonging to the KIN group will be faster and more fluent with fewer instances of dictionary consultations. The analysis of variance (ANOVA) mercilessly showed that the results were not what was expected.

#### 7.5.1. KIN as a single variable

Most of the answers to the questions for the KIN group were very brief and can be summarized as follows. The story of Zorro was familiar to all the subjects, not all the subjects have seen the film, the majority have placed the film as being set in the USA but there were some subjects who thought it was Spain, the film category was named as ‘adventure’ or ‘adventurous’ film. The story was described as funny, action packed, interesting, surprising, uncomplicated, dynamic, etc. All the subjects agreed that the story is universal. Among other fictitious characters judged similar to Zorro the names which were frequently mentioned included: Batman, Superman, Spiderman, Robin Hood, or the Polish hero *Janosik*. All the subjects gave a brief account of the two opponents in various ways, for example: the good against the bad, Zorro against Armand. The words given to describe Zorro included a list of adjectives: brave, handsome, clever, noble, smart, fit, courageous, fearless, and reckless. The sentence: ‘When I think about Zorro I can see...was finished in a multitude of ways, for example, ‘When I think about Zorro I see a hero in disguise, his letter ‘Z’ or Antonio Banderas.

Although a lot of answers were similar, they included personal judgments about the film, the story and the main hero. Consequently, it can be assumed that all the subjects have activated in their memory their conceptual knowledge relevant for the SL text they were just about to translate. The cognitive components kin to the content of the SL text must have been activated in the subjects’ memory but whether or not they have been adequately integrated for the task at hand remains unclear. However, the further task to encode their answers in English which is the language into which they will translate provided favourable conditions for the process of knowledge integration including conceptual and bilingual knowledge structures. Following this line of reasoning I assumed that the subjects in the KIN group had created a relevant Knowledge Integration Network which as it was hypothesized in chapter 5 should facilitate the translation process, speed up language processing and lexical access. The KIN would provide essential information for the metacognitive supervision that will be switched on until the translation task is successfully completed.

To test this hypothetical assumption the translation performance of all the subjects from the KIN group was recorded in Translog files and matched against the translation performance of an equal number of subjects from the NO KIN group. The No KIN group translated the same text with the same translation brief but they did not receive the list of questions that is, there was no induced KIN involved in the task. All the translations were performed on five computer stations in the computer lab which was reserved for that purpose. The conditions were similar to those described in Study 1. The subjects were asked to work at their usual pace and they were told that they are participating in a translation process awareness project. During single sessions the subjects belonged to the same group, either the KIN or NO KIN group so that they would not be aware of the differences in the experiment design. The researcher was tactfully present all the time in case the subjects needed assistance but every care was taken not to interrupt the privacy of work carried out by the subjects. All the subjects worked very conscientiously, they were extremely involved, focused and devoted to do their best and they did not interrupt each other in any way. None of the subjects requested a break and they all worked until they finished and clicked 'stop logging' and saved their Translog file.

#### 7.5.2. Duration and other text production features

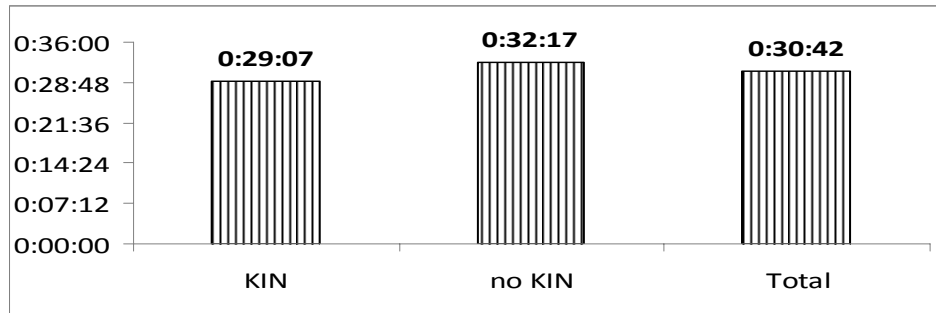
Since the two groups KIN and NO KIN differed in one respect (single variable), namely the KIN group had to answer 10 questions in writing and answering them required consulting their knowledge base, thinking, making judgments and formulating opinions prior to translating the film review, it was expected that the KIN group will on average take much longer to perform both tasks than the NO KIN group which was asked only to translate the text. Looking at the raw data, answering the questions took from 03:08.070 to 10:03.116. At the very start the KIN subjects were then from 3 minutes to 10 minutes behind the NO KIN subjects. If they managed to catch up with the KIN subjects anyway it would mean that the time spent on building the KIN paid off. Graph 15 shows that answering questions did not make the KIN subjects lag behind the NO KIN group. The time taken to read and write down answers to the 10 questions in a way paid off and the KIN group was slightly faster, although the difference is statistically insignificant. Like it was in Study 1, the reasons might lie in still statistically small samples (data gathered from 50 subjects in each group might show significant differences)

and in major idiosyncratic differences between the subjects in both groups. As Graph 15 (see Appendix 1) shows indeed there was no significant difference not only between the duration of the task in both groups but also with respect to other features available through Translog.

The time taken to perform the entire task was slightly longer for the KIN group which shows that the extra cognitive tasks of activating and integrating relevant knowledge prior to the onset of translation introduced only slight differences (under 3 minutes) between both groups. The slight difference in duration is lower than it was predicted taking into account the range of time the KIN subjects took to answer questions. Statistically the difference is insignificant. It is the other features of the translation process that were more disappointing when they showed no significant differences between the two groups. Significant correlations though confirmed the mutual relationship between duration and text production features and are visible in Graph 16 (see Appendix 1).

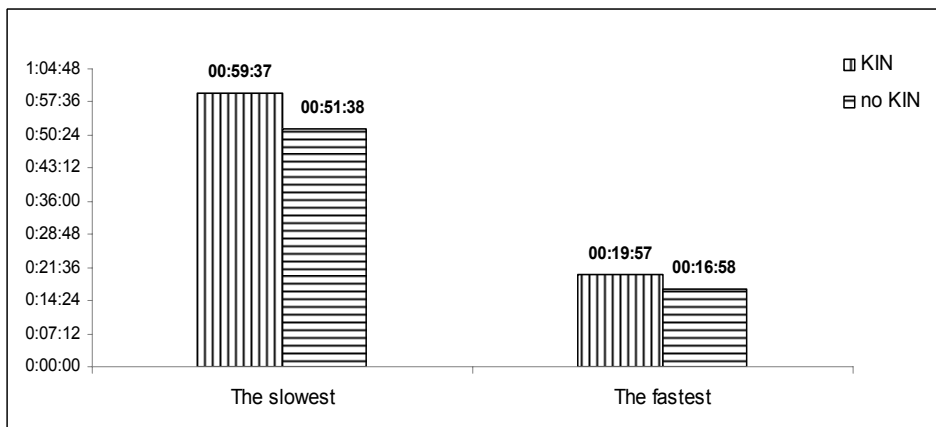
The strength of the correlation between duration and TPM ( $r = -0,929$ ) clearly shows that the lower TPM the longer the time spent on translation. The correlation between duration and dictionary use (DU) is also very strong ( $r = 0,581$ ), has the opposite direction and confirms that the more use of dictionaries, the longer time was needed to complete the task. Another significant correlation was revealed between dictionary use (DU) and typing speed (TPM). The negative direction of the correlation confirms that the more frequent use of dictionaries affects the TPM to a moderate strength ( $r = -0,535$ ). The remaining features, text elimination (TE) and navigation in the text (CN+ME) did not reach a significant level. However, there was a strong correlation between navigation in the text and text elimination ( $r = 0,371$ ) pointing to the tendency of beginners in translation tasks to frequently change their minds when drafting their translation (cf. group G1 Study 1).

If the effect of KIN was as predicted able to facilitate the translation process making it more fluent the KIN subjects should have consulted dictionaries less and should have shown less uncertainty reflected in text elimination, and a considerably higher rate of Text Production per Minute (TPM) than the NO KIN subjects. The next step to search for significant differences was taken. The time used for reading and answering questions (induced KIN) by the KIN subjects was then subtracted for each individual translator and the results are demonstrated in graph 17.



Graph 17. Duration for both groups after the time for inducing KIN was subtracted.

The graph shows that the KIN group was on average a bit faster in their TL text production although the difference does not reach statistical significance in the analysis of variance (ANOVA). Similar to the results obtained in Study 1, a look at the raw data shows vast idiosyncratic differences between the subjects in both groups which similar to Study 1 are obliterated in the results delivered by inferential statistics. To illustrate this highly personalized translation performance Graph 18 shows the duration for the slowest and the fastest translators in both groups.



Graph 18. Duration for the slowest and the fastest translator.

As it could be expected the idiosyncratic differences visible in duration were also reflected in other text production features. In line with the results obtained in Study 1 the most significantly correlated features in-

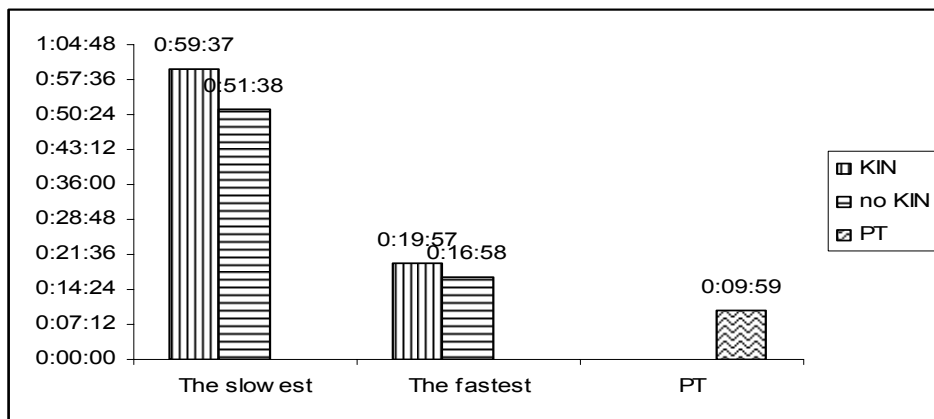
cluded the use of dictionaries and text production per minute (TPM). Table 7 presents raw data for the slowest and the fastest translators in both groups with the data for a practicing translator with 30 years of experience in providing translation services (subject S1 G3 from Study 1) who also translated the SL text used in Study 2.

The table shows the features of TL text production which are the most time consuming for participants in Study 2 and the most time saving for an experienced professional translator.

Table 7. Differences in text production features between the slowest and the fastest translators in both groups matched with the data for a practicing translator with 30 years of experience.

Translation performance	Dictionary use	Text elimination	Navigation in the text	TPM
KIN the slowest	21	277	166	28.45
KIN the fastest	4	44	93	58.72
NO KIN the slowest	14	65	193	25.52
NO KIN the fastest	7	46	135	69.74
PT	0	71	20	115.77

Consequently, the differences in duration (graph 19) are impressive and again the correlations with other important text production features affect the amount of time needed to translate the SL text.



Graph 19. Duration for the slowest and the fastest translator matched with the duration for a practicing translator [PT] with 30 years of experience.

The differences between the text production features visible in the raw data are quite striking even between the fastest translators in the KIN and NO KIN groups and a well experienced practicing translator. It is therefore confirmed that experienced professionals save time on such translation performance features as dictionary consultation, excessive navigation within the TL text and faster typing speed. These time saving factors can be a consequence of the proposed ability to integrate knowledge for the task at hand, which develops in practicing translators parallel to the professional experience and due to their conscious effort to reach the level of translation expertise. As it was tentatively concluded in chapter 6, building a KIN which is a natural and fairly automatic goal oriented process for a well experienced translator facilitates the translation process in terms of the time it takes to translate a text and the fluency of the TL text production process. As suggested in chapter 5 the ability to integrate relevant knowledge develops with translation experience and it should not come as a surprise that it cannot be artificially created in novice translators. The disappointing results in Study 2 confirm this suggestion. One more attempt was made to find significant results between the KIN and NO KIN groups. The two slowest and two fastest translators were removed from each group which meant that the number of subjects was reduced to 20 (N20) per group for further analysis. Having removed the most peripheral subjects no significant differences became apparent in all other features apart from two. As it is visible in table 8 the two groups now differed significantly in terms of events per minute that is in terms of the speed of the overall keyboard activity and in terms of TPM.

Table 8. Significant differences between the groups.

#### Independent Samples Test

	t-test for Equality of Means				
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Text elimination	0,784	38	0,438	19,850	25,322
Total User Events	0,458	38	0,650	62,850	137,238
Text production	0,019	38	0,985	0,600	31,502
Cursor navigation	0,231	38	0,819	25,750	111,535
Mouse Event	1,286	38	0,206	16,550	12,871
Navigation in text	0,387	38	0,701	42,300	109,265



Dictionary Use	-0,551	38	0,585	-1,250	2,269
Events per minute	2,183	38	0,035	12,83650	5,87906
Text Production per minute	2,471	33,105	0,019	8,52250	3,44903
Duration	0,170	38	0,866	00:00:30	00:02:53

It was the NO KIN group which performed significantly more actions per minute than the KIN group. Could this be taken as evidence lending support that the KIN group knew better what they were looking for following the knowledge integration effort which was induced in the experiment design? Even if it could, it is evidence which follows the manipulation of raw data as the previous samples (N24) did not produce significant differences. More keyboard activity for the NO KIN group can mean that their translating was more dynamic and included more hit and miss choices.

To sum up, the results in Study 2 did not support the hypothesis that an artificially created KIN will facilitate the translation process in inexperienced translators in terms of speed and fluency. This result although initially disappointing can be explained in terms of the developmental continuum alongside which the human skill to translate develops. The evolution of translation as a human skill from a natural ability to expertise is a developmental process. Essentially, it is a learning process in which the translator as an expert learner (see chapter 5) self-discovers (either supported by structured training or self-learning) how to solve problems and make decisions in the most effective and efficient way. Every new commission and every new text for translation is the source of new experiences which teach the reflective translator (expert learner) to make informed choices relying on all the knowledge that can be made available and integrated into a responsive KIN. The results of Study 2 confirmed that the inexperienced and experienced translators look at the translation task from a different vantage point and therefore have different priorities. The novices are devoted to making the best most ideal choices at the level of words therefore for them the words matter and since their bilingual knowledge is still in the making they search for confirmation of their choices, change their mind and make an admirable mental effort to bridge the language gap and complete the translation task. It is clear that the 2BA subjects do not feel at home in their L2 and integrating only their bilingual knowledge takes, if not entire then a substantial part of their mental space. The lack of communicative competence and communicative confidence in L2 use meant that the subjects who were induced to perform

considerably more information processing including their cognitive and linguistic level were neither faster nor more fluent in the TL text production process than the subjects who went straight into the translation process. A glance at the Translog files of randomly chosen translators from the KIN and NO KIN group illustrates this point (see Appendix 3).

In contrast, the well experienced translators, among other things feel more at home with their L2 and they have discovered that often there is no single ideal solution to a translation problem but there is a range of choices. It is possible that their ability to integrate all the relevant knowledge into an adequate KIN activates only those TL lexical items which match their conceptual intentions. With time and conscious effort to use their both languages as efficient experienced translators they become more confident about their choices. Having crossed the language barriers many times they develop trust in their decisions and discover that it is not the particular words which are selected that matter but the function they perform in the conceptually driven translation process. In a way the lexical choices and other text processing features are subject to higher order thinking which guides metacognitive supervision over the entire translation process. As hypothesized in chapter 5 and confirmed in chapter 6 the metacognitive supervision relies on an adequate Knowledge Integration Network created in the translating mind. The results obtained in Study 2 show that the ability to integrate knowledge for the purpose of translating is developmental in nature and cannot be artificially induced in translators with low levels of translation proficiency. It is most likely that the evolution of the ability to integrate knowledge is a slow process which requires conscious involvement of the translator as an expert learner who through repeated translation experience, corrective feedback (external in formal instruction or internal in self-development) and self-reflection learns to build Knowledge Integration Networks for the purpose of translation. Then just as an expert piano player he or she can focus on the entire outcome, the overall impression while at the same time being sure that his/her metacognitive supervision will spot and see to all the problems at a lower level of lexical choices during the physical execution of the translation process. Inexperienced translators still spend a lot of time looking for an appropriate key (e.g., word) to offer the most accurate lexical match between the SL text word and the TL text word rather than create a desired effect using other linguistic means.

## 7.6. Conclusions

The purpose of this chapter was to provide empirical evidence to confirm that the development of the human ability to translate to reach the level of translation expertise relies on the ability to integrate knowledge for the purpose of translating. Consequently, the less experienced translators were assumed to be less skilled at building adequate knowledge integration networks, or even less able to activate all the relevant knowledge structures and integrate them when translating. The process of knowledge integration cannot be directly observed as it takes place in the translator's mind in a way, which can perhaps be demonstrated by a connectionist model of cascaded multilayered activation spreading into the translator's long term memory, and triggering both conscious and unconscious thought processes.

Study 1 investigated three groups of translators who represented significantly different stages in the process of translation skill development. All the subjects were asked to translate a self-contained short text, a film review, from Polish into English using the Translog program.

The data analysis carried out with statistical tools for inferential analysis (ANOVA) showed no significant differences between the three groups of subjects in all text processing features chosen for analysis, that is duration, dictionary consultation, typing speed, on-line revision and post-draft revision. This result, however, was not taken as sufficient evidence to refute the hypothesis that the ability to integrate knowledge for the purpose of a translation task develops with experience. On the contrary, attention was drawn to the individual differences between the subjects within each group which were the most pronounced for the group of practicing translators. The raw data obtained through Translog show that although statistically all the subjects took a similar amount of time to translate the SL text, the time was differently distributed throughout the translation process.

It was my intention to demonstrate that the control function in the translation process is performed by the metacognitive supervision which relies on the adequately activated and integrated knowledge in the translating mind. Study 1 showed that the ability to create adequate KINs develops with translation experience. Very experienced translators reap the benefits of adequate knowledge integration both declarative (meanings of words, knowledge of text types and various kinds of encyclopedic information relevant to the subject matter of the SL text) and procedural (L1

and L2 competence, accessing relevant procedures to make chosen words fit the contextual patterns, typing skills, self-monitoring and self-correction). As a result their translation process is fast and fluent. Much less experienced translators had problems with integrating even their bilingual knowledge and more experienced translation trainees, or beginners in the profession put a lot of effort into consciously building an adequate KIN but they still displayed a lot of uncertainty in their decision making. The quality of the translations produced by the three groups of subjects was not analyzed in the study. Nevertheless, a qualitative analysis could yield more supportive evidence for the consequences of the hypothesized ability to integrate knowledge, provided that it is carried out following objective quality assessment procedures<sup>5</sup>. To provide some insight into the TL text quality samples of TL texts from each experimental group, together with their Translog files and the SL text are presented in Appendix 2.

Study 2 showed that an experimentally manipulated KIN for a task ahead did not result in the improved translation performance of 2BA EFL students. Possibly a qualitative analysis bringing together the data on the process and the assessment of the product, the actual TL text could yield more informative results on the effects of the experimentally induced KIN. A qualitative analysis however was not intended either in Study 1 or in Study 2. Translog as a new research tool allows for quantitative analyses of the translation process by providing objective data, whereas a qualitative analysis would introduce subjectivity in the choice of criteria used to assess translation quality (see House 2001: 257). Using a common sense approach it can be assumed that all the translations performed by the Study 2 subjects have similar flaws as the ones described in chapter 3 (see Appendix 3 for the SL text used in the experiment and samples of translations with Translog files). However, investigating lexical access in both groups could provide a broader picture of the relevance of making an effort to activate and integrate relevant knowledge (in the KIN group) before embarking on a translation task. This issue is open to investigation in my future studies.

To sum up, the results of both studies point to the evolutionary nature of the process in which the human skill to translate develops to reach the level of expertise. The hypothesis that the development of expertise in translation depends on the ability to integrate knowledge for a task at hand

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<sup>5</sup> See chapter 5 on problems with translation quality assessment.

seems to have been validated by the Translog data on TL text production features. However, the results show that it is a slow cognitive process. There was hardly any difference between the 2BA group (G1) and the Translation trainees group (G2), and the novices in the profession in terms of duration and the use of external resources. Clear differences appeared only in the group of practicing translators. It seems that the development of translation expertise can be seen as a learning process, in which the translator with all the qualities of an expert learner develops his/her self-confidence as an intercultural mediator in otherwise impossible communication. It is a process of self-involved conscious effort to acquire expertise which relies on declarative and procedural knowledge integration (cf. Alves and Gonçalves 2004: 42<sup>6</sup>). Observing the performance of translators at different stages on the developmental continuum reveals important facts about translation as an activity. Everybody who has access to two languages can translate, but in the process of translation there will be different processing patterns which can be objectively analyzed through Translog. Still, many questions remain including those most fundamental: Can we, as translator trainers speed up the process in which future translators learn to integrate all the knowledge relevant for a task at hand? Can we structure the training programmes in a way which gives future professionals the best possible learning environment to raise their self-awareness of their role in the learning process? Many voices have been raised putting forward valuable suggestions. Kiraly (2000, 2005) stresses the importance of realistic translation assignments, González Davies (2004) opts for collaborative learning, Piotrowska (2007) suggests focusing on a strategic approach to translation tasks. With the research discussed in this chapter I add the implication of raising the awareness of the developmental route to translation expertise, and engaging the expert learner's self-involvement in the developmental journey from natural predisposition to translate to expertise in translation. Looking at the translation performance discussed in Study 1 and Study 2, it seems that this knowledge is not subject to explicit instruction in an old-fashioned transmissionist manner. For many translators-to-be it remains a process of self-discovery and self-development, also confirmed by the voices of practicing translators analyzed in chapter 6. What can be done,

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<sup>6</sup>Alves and Gonçalves (2004: 42) introduced a concept of translator's rather than translation competence. This change of perspective allows to account for the individuality of expertise acquisition stressed in this analysis.

however, is to make the implicit learning process more explicit by raising the trainees' awareness of it taking place in their learning minds. The proposal of the ability to build Knowledge Integration Networks implies that translation training practice apart from real-life translation assignments<sup>7</sup> could also apply knowledge integration for the task at hand, in the form of simulated translation performance. Decomposing a KIN into specific knowledge components including conceptual knowledge (Common Underlying Conceptual Base (Kesckes and Papp 2000) and domain specific knowledge) and bilingual knowledge (including all levels of language, as well as norms referring to social practice) could allow to practice knowledge integration with focusing on interconnections between various knowledge components, i.e., conceptual-lexical within L1, L2 and including both languages. The fluency and speed of lexical access can be practiced for any chosen translation task prior to the onset of the actual translation process. In other words, knowledge integration tasks can be used in a similar manner brainstorming is used for practice in creative writing. Putting beginning translators in the right frame of mind through knowledge integration can warm up their cognitive resources and help them in the translation process.

To provide a clear methodology of how to best structure the tasks in which future translators can learn to integrate all relevant kinds of knowledge needed for a translation task at hand more research is needed involving all the disciplines that Translation Studies are related to, SLA, psychology, psycholinguistics, neurolinguistics and cognitive studies. Finding synergies between language-related disciplines could further validate the hypothesized ability to integrate knowledge into task-specific Knowledge Integration Networks in expert performance. Translation after all is an operation on sometimes very subtle information encoded in languages, decoded in the translating mind and enciphered in another language for others, for other generations, for humanity. It is my conviction that the service translators have provided throughout history makes them well informed research subjects irrespective of the stage they occupy on the developmental continuum of translation as a human skill. Investigating how translators process information encoded in languages can inform us about the routes of development of human intellectual potential.

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<sup>7</sup> Which as pointed to in chapter 4 are valuable but extremely time-consuming (see Kiraly (2005) on his subtitling project).

## **Conclusions and Implications**

The aim of this book was to show the human ability to translate in its evolutionary perspective. Suggestions were made that the human mind is intrinsically a translating mind which constantly is involved into decoding and encoding meaning to meet the needs of social interaction and communication. For the mind to be truly mind-sharing (Donald 2001) languages came to serve the purpose of communication. While language shared by its community fulfils the communicative function it at the same time creates a barrier to all people, who do not share its knowledge as a system or as a social practice. Most people have experienced this uncomfortable feeling of being barred from accessing information if it has been encoded in an unknown language. Since, however, the human need to communicate is possibly one of the strongest human desires, and following the popular saying, 'If there is a will, there is a way' translation became the way to overcome barriers imposed by languages.

Translation as a broad cluster concept involves many means (interlingual, intralingual, intersemiotic) and different modalities (written, oral, sign translation). Yet, with the exclusion of the still narrowly applied area of machine translation, it is performed in the human mind before its socially required product can enable an otherwise impossible exchange and flow of information. Because everybody who has access to two languages can translate, in the sense that he or she is able to perform this operation, translation as a human skill is frequently perceived as a simple process of transcoding, and it is therefore socially expected of bilinguals or multilinguals. A more detailed analysis of the different demonstrations of the human ability to translate, however requires to see translation skill in its developmental continuum from the human predisposition to translate to professional expertise. The necessity to distinguish between such concepts as translation ability, translation skill, translation competence and translation expertise becomes essential to avoid confusion and misunderstanding.

Chapter 1 discussed these concepts and established common grounds for a detailed analysis of the human ability to translate in its developmental continuum.

Since interlingual translation as a communicative strategy involves the knowledge and use of two different languages by one person, his/her bilingual knowledge constitutes the foundations on which translation skill and translation competence can be built. A thorough analysis of the underlying bilingual knowledge conducted in chapter 2 showed its internal complexity, and dynamic dependence on other factors such as language acquisition history and the psycholinguistic processes of cross-linguistic interaction. Discussing such essential concepts as bilingual memory, language control and the cognitive consequences of bilingualism was considered essential to understanding the developmental nature of translation as a human skill. This assumption was confirmed in chapter 3 which discussed translation as an untrained ability of bilinguals.

No matter whether a second language was acquired in a natural process of acquisition or through learning, the users of two languages can act as natural translators, in the sense that when translating they rely on their bilingual knowledge, and have not received any training in translation. Translation is a widespread social phenomenon, a part and parcel of people's lives as bilinguals in everyday interaction in multilingual communities and natural translators provide a vital link to keep the communication going. Acting as language brokers they can produce communicatively functional translation although as the scant research has shown the form it takes does not meet professional standards of quality. While natural translators do not attach importance to the formal aspects of language and focus on meaning transfer, L2 learners acting as natural translators attach more importance to the form than to meaning. However, as research into L2 translation has shown in the course of translation practice they fairly quickly learn to address the form/meaning imbalance and as a result, and quite incidentally they start to see their bilingual knowledge from a more holistic perspective. Translation experience even if it is not aimed at training L2 learners as translators but used as a pedagogical tool enhances their metalinguistic abilities and helps them acquire intercultural competence. These obvious assets of translation experience point to a transformation which has to occur for the further development of translation as a human skill to become possible. Since, however, the natural ability to translate has not received ample



attention from translation scholars its potential remains to be utilized and can be expected to shed more light on the nature of transformation from a bilingual into an interlingual individual. A point is made that in order to evolve into a trained skill with its underlying professional competence a bilingual individual has to make conscious intentional effort to reorganise and restructure his/her bilingual foundations.

For those who choose to develop their untrained ability to translate into a trained skill allowing for fluent performance the notion of translation competence becomes of vital importance. A detailed discussion of one of the most frequently discussed concepts in Translation Studies shows that Translation Competence (chapter 4) has defied an acceptable definition that would satisfy, if not all then at least the majority of scholars. Whether seen from an additive, componential or minimalist perspective Translation Competence is seen as experience-derived knowledge allowing for fluent and professionally adequate translation. Yet, the process of acquiring this insider's knowledge of how to produce professionally satisfying translations cannot be dismantled into stages for a number of reasons. One of them is the difficulty in defining the constituent concepts of translation quality and professionalism in translation. In today's world the need for translation services is constantly growing, translator training institutions are set up and they have to cope with the 'pedagogical gap'. To counterbalance the lack of guidance from translation theory effort is made to provide the trainees with real-life translation experience. By incorporating the ideals of social constructivism and collaborative learning it is hoped that the trainees will for themselves acquire the necessary knowledge to enter the translation market. A glimpse into translation as a profession points to the extremely high requirements imposed by translation training institutions which are considered important for those who want to become professional translators. Many points on the developmental route of translation competence acquisition remain unclear. Such points include different routes to translation competence, including self-coaching and translator training, and personality factors. A suggestion was made that the notion of the translator as an expert learner might be able to account for a multitude of factors involved in translation competence acquisition which apart from the underlying knowledge gives one the personal self-confidence to provide translation services.

Chapter 5 discussed the possibility that translation as a human skill to reach the level of professional competence relies on the ability to integrate

knowledge into what I termed a Knowledge Integration Network. The theoretical foundations of the Knowledge Integration Network were discussed taking into account such assumptions as the limited capacity of the human mind, automatized and controlled processing and meta-cognitive supervision. The hypothesized KIN is a dynamic network which facilitates the translation process and enables the retrieval of information from the translator's long term memory including the necessary linguistic means to produce a TL text. When faced with a specific translation task the translator activates and integrates all the knowledge that he/she perceives as relevant for (i.e., kin to) the task at hand. The ability to create adequate Knowledge Integration Networks is developmental in nature and translators differ in their knowledge integration ability depending on the stage they currently occupy on the developmental continuum of translation as a human skill. The role of adequately integrated knowledge was pointed out in a detailed comparison of translation performance between inexperienced and experienced translators. The differences in how a KIN is utilized were visible at every stage of the translation process, from reading a SL text for translation to the stage of revision. Further suggestions were made that the developmental ability to integrate knowledge is best viewed from the perspective of the translator as an expert learner, a Systems Intelligent person who through practice and self-reflection learns to engage and utilize his or her cognitive potential to perform so much socially required translation services. This perspective allows encompassing different routes to translation competence and expertise and shows the development of the professional self as a process of developing personal professional self-confidence. Suggestions were made that to make our knowledge of translation expertise development more comprehensive the role of affective factors and personality issues in the process of TC acquisition need more attention in future research.

Chapters 6 and 7 attempted to empirically verify the hypothesized ability to integrate knowledge (build a KIN) in translators occupying different stages on the developmental continuum. Chapter 6 included an analysis of the questionnaire study conducted among potential and practicing translators. The data gathered from 200 respondents allowed for a comprehensive study of ideas about translation as a profession and about translation as an activity. The still high interest in pursuing a career in translation among students of English as a foreign language shows that the profession has a lot to offer to those who want to make a conscious in-

tentional effort to acquire the necessary translation competence (TC). Most gains were reported in the intellectual potential of translation as an activity requiring the comprehensive use of knowledge both conceptual and linguistic, confirming the role of knowledge integration in the form of hypothesized Knowledge Integration Networks. A further analysis of the interdependencies between bilingual knowledge, metalinguistic awareness and translation experience provided insightful information confirming the hypothesized ability of integrating knowledge into a KIN as an important part of developing the human ability to translate to the level of professional competence. Mutual benefits between bilingual knowledge, metalinguistic awareness and translation practice were pointed out as potential assets to be used for translator training and L2 teaching methodologies. The suggestion discussed in chapter 5 that translators are best perceived as expert learners devoted to a life-long learning process to reach the level of translation expertise was confirmed by data elicited from practicing translators. A detailed analysis of the translation process carried out through responses to the questionnaire confirmed the integrative nature of the translation process supporting the role of the hypothesized ability to integrate knowledge into temporary Knowledge Integration Networks as an important part of TC acquisition. Although the number of subjects was not impressive (40 practicing translators) and the urge to make generalizations has to be restrained the data gathered can serve as a real-life illustration to counterbalance assumptions and misconceptions about translation as an activity performed by professional translators. Since the translation process always takes place in the translator's mind the interest in the translator as an individual provided an empirically valid personal profile of those who have chosen and continue to enjoy translation as their professional career. The results confirmed that the translator as an individual is devoted to continuous development through conscious language maintenance (involving both working languages), intellectual curiosity and self-reflection. This conclusion could be utilized in translation pedagogy. In terms of further research the personality determinants and the role of affective factors in translation expertise development need further investigation.

The tentative confirmation of the assumption that the ability to integrate knowledge for the purpose of translation into an adequate KIN develops over a period of time following practice and self-reflection was

further investigated in chapter 7. Translation process data were collected through Translog, a computer key logging programme which allowed for a thorough insight into TL text production including duration, erased sections of text, pauses, navigation within the text and dictionary use. Study 1 investigated the translation process of three groups of translators treated as representatives of three different stages on the developmental continuum of translation as a human skill, inexperienced translators (2BA EFL students), translation trainees and experienced practicing translators (with different length of practice). The results analyzed with the analysis of variance ANOVA showed no statistically significant differences in TL text production features available through Translog among the three groups of subjects. This seemingly disappointing result summoned two interpretations. The samples of subjects were too small (N8 in each group) and there was a wide range of individual differences within each group which was obscured by the statistical tools. A closer look at the raw data provided more interesting results and confirmed that the time used for the TL text production was differently distributed throughout the translation process by the three groups of subjects. The subjects in the inexperienced group spent the least amount of time to read the SL text which allowed to assume that they did not create an adequate KIN for the task at hand. The trainees and professional translators spent more time to read the SL text and it can be tentatively concluded that they created a KIN which resulted in a more fluent translation process and a more efficient meta-cognitive supervision over the translation process. Similar differences reported in terms of dictionary use, navigation within the text, on-line and post-draft revision point to the developmental nature of the ability to build a Knowledge Integration Network for a task at hand. The group of professional translators was analyzed in more detail and significant correlations between length of practice and text processing features were established and taken as supporting evidence for the proposed ability to build a KIN.

Study 2 aimed at the further testing of the hypotheses formulated on the grounds of the empirical evidence gathered in Study 1 that a KIN created in the translating mind will facilitate the translation process. 2BA subjects were divided into two experimental groups who were translating the same text. The KIN group apart from being asked to translate a SL text into English was asked to answer 10 questions aimed at creating in their mind an induced Knowledge Integration Network. The statistical analysis conducted

with ANOVA did not show any significant differences between the text production features between both experimental groups apart from the overall keyboard activity and text production per minute. Again like in Study 1 there were considerable individual differences between the subjects within both groups. The conclusion following Study 2 while seemingly disappointing, points to the fact that developing the ability to integrate knowledge for a translation task at hand is a slow process of development and maturation. The limited capacity of the human mind did not allow for a speeded up translation process following an artificially created Knowledge Integration Network in the KIN group. Another possible explanation is that the KIN created in the subjects' minds was limited to integrating only the bilingual knowledge (or only the lexical level) without the support of the conceptual integration which could prime access to TL linguistic means. It is also possible that the statistical tools used in the study are not efficient and the very much individual translation process defies any generalizations. Other interpretations invite future research.

The comprehensive study of translation as a human skill presented in this volume aimed at showing its developmental continuum from predisposition to expertise. This perspective on translation as an ability is able to encompass all forms and functions translation serves and has served throughout history. As a result it provides an all inclusive framework to study translation performed by all possible human translators whether trained or untrained and it does not deny the ability to anybody who helps others divided by languages to communicate. In a sense we are all translators, but since we differ in the way we integrate knowledge for the purpose of translation we produce different translations. This variability factor applies to all translators who, even if they share a seemingly similar translation competence, will never produce completely identical translations. Using the framework in future research could allow for a more fine grained distinctions not only between natural and trained translators but also between competent, practicing, professional and expert translators.

If the ideas contained in this book can encourage others to further research the developmental continuum of translation as a human skill, or if some suggestions can be of any use to translator training and its closest relative Second Language Acquisition research I will be more than happy.



## References

- Abutalebi, Jubin – Jean-Marie Annoni – Ivan Zimine – Alan J. Pegna – Mohamed L. Seghiern – Hannelore Lee-Jahnke – François Lazeyras – Stefano F. Cappa – Asaid Khateb. 2007. “Language control and lexical competition in bilinguals: An event-related fMRI study”. *Cerebral Cortex*. (<http://cercor.oxfordjournals.org/cgi/content/full/bhm182v1>) (date of access 20 May 2010).
- Adab, Beverly. 2000. “Evaluating translation competence”. In: Schäffner, Christine – Beverly Adab (eds.), 215-228.
- Afendras, Evangelos A. (ed.). 1980. *Patterns of bilingualism*. Singapore: RELC.
- Aitchison, Jean. 1996. *Words in the mind*. 2<sup>nd</sup> edition. Oxford: Blackwell.
- Alatis, James E. (ed.). 1992. *Language, communication and social meaning*. Washington DC: Georgetown University Press.
- Albert, Martin L. – Loraine K. Obler. 1978. *The bilingual brain: Neuropsychological and neurolinguistic aspects of bilingualism*. New York: Academic Press.
- Altariba, Jeanette – Roberto Heredia (eds.). 2008. *An introduction to bilingualism: principles and processes*. Mahwah NY: Lawrence Erlbaum Associates.
- Altenberg, Evelyn P. – Helen S. Cairns. 1983. “The effects of phonotactic constraints on lexical processing in bilingual and monolingual subjects”. *Journal of Verbal Learning and Verbal Behaviour* 22: 174-188.
- Álvarez, Roman – Carmen-África Vidal (eds.). 1996. *Translation, power, subversion*. Clevedon: Multilingual Matters.
- Alves, Fábio (ed.). 2003. *Triangulating translation*. Amsterdam: John Benjamins.
- Alves, Fabio. 2005. “Ritmo cognitivo, meta reflexão e experiência: parâmetros de análise processual no desempenho de tradutores novatos e experientes”. In: Pagano Adriana – Celia Magalhães – Fabio Alves (eds.), 109-169.
- Alves, Fabio – José L. Gonçalves – Rui Rothe-Neves. 2001. “In search of a definition of translation competence: the structure and development of an ongoing research project”. *Quaderns. Revista de traducció* 6: 46-49. (<http://ddd.uab.es/pub/quaderns/11385790n6p46.pdf>) (date of access 10 January 2010).
- Alves, Fabio – José L. Gonçalves. 2004. “Modelling translator’s competence. Relevance and expertise under scrutiny”. In: Gambier, Yves – Miriam Shlesinger – Radegundis Stolze (eds.), 41-55.
- Anderman, Gunilla. 1998. “Finding the right word: translation and language teaching.” In: Malmkjaer, Kirsten (ed.), 39-48.
- Anderman, Gunilla – Margaret Rogers (eds.). 1999. *Word, text, translation. Liber amicorum for Peter Newmark*. Clevedon: Multilingual Matters.

- Andersen, Roger W. 1983. "Transfer to somewhere". In: Gass Susan – Larry Selinker (eds.), 177-201.
- Anderson, R. Bruce. 1978. "Interpreter roles and interpretation situations: Cross-cutting typologies". In: Gerver, David – Wallace H. Sinaiko, (eds.), 217-229.
- Anderson, John R. 1980. *Cognitive psychology and its implications*. San Francisco: Freeman.
- Anderson, John. R. 1985/2005. *Cognitive psychology and its implications*. New York: Freeman.
- Anderson, John R. 1996. "ACT: A simple theory of complex cognition". *American Psychologist* 51,4: 355-365.
- Angelleli, Claudia V. – Holly E. Jacobson (eds.). 2009. *Testing and assessment in translation and interpreting studies*. Amsterdam: John Benjamins.
- Appel, René – Pieter Muysken. 1996. *Bilingüismo y contacto de lenguas*. Barcelona: Ariel Lingüística.
- Arabski, Janusz. 1979. *Errors as indicators of the development of interlanguage*. Katowice: Wydawnictwo Uniwersytetu Śląskiego.
- Arabski, Janusz. 2006. "Language transfer in language learning and language contact". In: Arabski, Janusz (ed.), 12-21.
- Arabski, Janusz (ed.). 2006. *Cross-linguistic influences in the second language lexicon*. Clevedon: Multilingual Matters.
- Arabski, Janusz – Adam Wojtaszek (eds.). 2009. *Multidisciplinary perspectives on second language acquisition and foreign language learning*. Katowice: Wydawnictwo Uniwersytetu Śląskiego.
- Arabski, Janusz – Adam Wojtaszek (eds.). 2010. *Neurolinguistic and psycholinguistic perspectives on SLA*. Bristol: Multilingual Matters.
- Arntz, Reiner (ed.). 1988. *Textlinguistik und Fachsprache – Akten des Internationalen übersetzungswissenschaftlichen AILA-Symposiums*. Hildesheim: Olms.
- Arntz, Reiner – Gisela Thome (eds.). 1990. *Übersetzungswissenschaft. Ergebnisse und Perspektiven. Festschrift für Wolfram Wilss zum 65. Geburtstag*. Tübingen: Narr.
- Asadi, Paula – Candance Séguinot. 2005. "Shortcuts, strategies and general patterns in a process study of nine professionals", *META* 50,2: 522-547.
- Atkins, Sue (ed.). 1998. *Using dictionaries*. Tübingen: Max Niemeyer Verlag.
- Atkins, Sue – Krista Varantola. 1998. "Monitoring dictionary use". In: Atkins, Sue (ed.), 83-122.
- Auerbach, Elsa. 1993. "Reexamining English only in the ESL classroom. *TESOL Quarterly* 27,1: 9-32.
- Baddeley, Alan D. 1986. *Working Memory*. Oxford: Oxford University Press.
- Baddeley, Alan D. 1996. "Exploring the central executive". *Quarterly Journal of Experimental Psychology* 49: 5-28.
- Baer, Brian J. – Geoffrey S. Koby (eds.). 2003. *Beyond the Ivory Tower*. Amsterdam: John Benjamins.
- Baker, Mona. 1992. *In other words*. Manchester: St. Jerome.



- Baker, Mona (ed.). 2001. *Routledge encyclopedia of Translation Studies*. London: Routledge.
- Baker, Mona – Gabriela Saldanha (eds.). 2009. *Routledge encyclopedia of Translation Studies* 2<sup>nd</sup> edition. New York: Routledge.
- Bartlett, Frederic C. 1932. *A study in experimental and social psychology*. Cambridge: Cambridge University Press.
- Bassnett, Susan. 1996. “The meek or the mighty: rephrasing the role of the translator”. In: Álvarez, Roman – Carmen-África Vidal (eds.), 10-24.
- Bassnett, Susan – André Lefevere (eds.). 1990. *Translation, history and culture*. London: Pinter.
- Beatsen Beardsmore, Hugo. 1982. *Bilingualism: basic principles*. Clevedon: Multilingual Matters.
- Beeby, Allison – Doris Ensinger – Marisa Presas (eds.). 2000. *Investigating translation*. Amsterdam: John Benjamins.
- Bell, Roger T. 1991. *Translation and translating: theory and practice*. London: Longman.
- Ben Zeev, Sandra. 1977. “The influence of bilingualism on cognitive strategy and cognitive development”. *Child Development* 48,3: 1009-1018.
- Bergström, Matti R. 1988. “Communication and translation from the point of view of brain functions”. In: Holz-Mänttari (ed.), 23-38.
- Berman, Antoine. 1989. “La traduction et ses discours”. *META* 34,4: 672-679.
- Bereiter, Carl – Marlene Scardamalia. 1993. *Surpassing ourselves: An inquiry into the nature and implications of expertise*. Chicago: Open Court Publishing Company.
- Bernardini, Silvia. 1999. *Using think-aloud protocols to investigate the translation process: methodological aspects*. Bologna: University of Bologna.
- Bernardini, Silvia. 2002. “Think Aloud Protocols in translation research : achievements, limits, future prospects.” *Target* 13,2: 241-263.
- Besner, Derek. – Marilyn C. Smith – Colin M. MacLeod. 1990. “Visual word recognition: A dissociation of lexical and semantic processing”. *Journal of Experimental Psychology: Learning, Memory, and Cognition* 16: 862-869.
- Beylard-Ozeroff, Ann – Jana Králová – Barbara Moser-Mercer (eds.). 1998. *Translators’ strategies and creativity*. Amsterdam: John Benjamins.
- Bhatia, Tej K. – William C. Ritchie (eds.). 2004. *A handbook of bilingualism*. Malden, MA: Blackwell.
- Bialystok, Ellen (ed.). 1991. *Language processing in bilingual children*. Cambridge: Cambridge University Press.
- Bialystok, Ellen (ed.). 2001/2005. *Bilingualism in development: language, literacy, and cognition*. Cambridge: Cambridge University Press.
- Bialystok, Ellen. 2005. “Consequences of bilingualism for cognitive development”. In: Kroll, Judith F. – Annette M.B. De Groot (eds.), 417-432.

- Bialystok, Ellen – Fergus I.M. Craik – Raymond Klein – Mythili Viswanathan. 2004. “Bilingualism, aging and cognitive control: evidence from the Simon task”. *Psychology and Aging* 19: 290-303.
- Biguenet, John – Rainer Schulte (eds.). 1984. *The craft of translation*. Chicago: The University of Chicago Press.
- Block, David. 2003. *The social turn in second language acquisition*. Edinburgh: Edinburgh University Press.
- Block, David. 2007. *Second language identities*. London: Continuum.
- Boekaerts, Monique. 1981. “Is there a direct link between the comprehension and the production process?”. In: Heid, Manfred (ed.), 26-60.
- Börsch, Sabine. 1986. “Introspective methods in research on interlingual and intercultural communication”. In: Juliane House – Shoshana Blum – Kulka (eds.), 195-209.
- Bowker, Lynne – Michael Cronin – Dorothy Kenny – Jennifer Pearson (eds.). 1998. *Unity in diversity?* Manchester: St. Jerome Publishing.
- Breedveld, Hella. 2002. “Writing and revising processes in professional translation”. *Across Languages and Cultures* 3,1: 91-100.
- Brislin, Richard W. (ed.). 1976. *Translation: Application and research*. New York: Gardner.
- Broeck, Raymond, van den (ed.). 1994. *Translated!: Papers on literary translation and Translation Studies/James S. Holmes*. Amsterdam: Atlanta.
- Bromberek-Dyzman, Katarzyna – Karolina Rataj – Jacek Dylak. 2010. “Mentalizing in the second language: Is irony online inferencing any different in L1 and L2?”. In: Witczak-Plisiecka, Iwona (ed.), 197-216.
- Brower, Reuben A. (ed.). 1959. *On translation*. Cambridge, MA: Harvard University Press.
- Bruner, Jerome S. – Allison Jolly – Kathy Sylva (eds.). 1976. *Play. Its role in development and evolution*. Harmondsworth: Penguin.
- Buchweitz, Augusto – Fábio Alves. 2006. “Cognitive adaptation in translation: an interface between language direction, time and recursiveness in target text production”. *Letras de Hoje* 41,2: 241-272.
- Bullock, Carolyn – Harris, Brian. 1997. “Schoolchildren as community interpreters”. In: Carr Silvana E. – Roda P. Roberts – Aideen Dufour – Dini Steyn (eds.), 227-248.
- Buttjes, Dieter – Michael Byram (eds.). 1990. *Mediating language and cultures: Towards an intercultural theory of foreign language education*. Clevedon: Multilingual Matters.
- Byram, Michael – Anwei Feng. 2005. “Teaching and researching intercultural competence”. In: Hinkel, Eli (ed.), 911-930.
- Byram, Michael – Peter Grundy (eds.). 2002. *Context and culture in language teaching and learning*. Clevedon: Multilingual Matters.
- Caine, Renate N. – Geoffrey Caine. 1994. *Making connections: teaching and the human brain*. Menlo Park, CA: Addison-Wesley.

- Canale, Michael – Merrill Swain. 1980. "Theoretical bases of communicative approaches to second language teaching and testing". *Applied Linguistics* 1: 1-47.
- Caramazza, Alfonso. 1997. "How many levels of processing are there in lexical access?". *Cognitive Neuropsychology* 14: 177-208.
- Carr, Silvana E. – Roda P. Roberts – Aideen Dufour – Dini Steyn (eds.). 1997. *The critical link: Interpreters in the community*. Amsterdam: John Benjamins.
- Carroll, John B. 1978. "How shall we study individual differences in cognitive abilities? – Methodological and theoretical perspectives". *Intelligence* 2: 87-115.
- Carroll, John B. 1993. *Human cognitive abilities*. Cambridge: Cambridge University Press.
- Carroll, John B. – Stanley M. Sapon. 2002. *Modern Language Aptitude Test – Elementary: Manual, 2002 Edition*. Rockville, MD: Second Language Testing, Inc.
- Cameron, Deborah. 2001. *Working with spoken discourse*. London: Sage Publications.
- Cao, Deborah. 1996. "Towards a model of translation proficiency". *Target* 8,2: 325-340.
- Catford, John. C. 1965. *A linguistic theory of translation*. Oxford: Oxford University Press.
- Cattell, Ray. 2006. *An introduction to mind, consciousness and language*. London: Continuum International Publishing Group.
- Chau, Simon. 1999. "From anonymous parasites to transformation agents – a 'third world' vision of translation for the new millennium". In: Anderman, Gunilla – Margaret Rogers (eds.), 233-235.
- Checkland, Peter. 1999. *Systems thinking, systems practice*. Chichester: John Wiley.
- Chesterman, Andrew. 2002. "On the interdisciplinarity of Translation Studies". *Logos and Language* 3,1: 1-9.
- Chesterman, Andrew – Natividad Gallardo San Salvador – Yves Gambier (eds.). 2000. *Translation in context*. Amsterdam: John Benjamins.
- Chesterman, Andrew – Eva Wagner. 2002. *Can theory help translators?* Manchester: St. Jerome.
- Chi, Michelene T. – Robert Glaser – Marshall Farr (eds.). 1988. *The nature of expertise*. Hillsdale, NJ: Erlbaum.
- Chen, Hsuan-Chih – Yuen-Sum Leung. 1989. "Patterns of lexical processing in a non-native language". *Journal of Experimental Psychology: Learning, Memory, and Cognition* 15: 316-325.
- Chen, Hsuan-Chih – Man-Lai Ng. 1989. "Semantic facilitation and translation priming effects in Chinese-English bilinguals". *Memory and Cognition* 17: 454-462.
- Chmiel, Agnieszka. 2004. *Neurocognitive plausibility of conference interpreting. Application of cognitive neuroscience to interpreting research*. Unpublished doctoral dissertation. Poznań. Adam Mickiewicz University.
- Chmiel, Agnieszka. 2006. "Skill-based approach to conference interpreting". *Translation Ireland. New Vistas in Translator and Interpreter Training* 17: 47-64.
- Chmiel, Agnieszka. 2010. "Interpreting studies and psycholinguistics: A possible synergy effect". In: Gile, Daniel – Gyde Hansen – Nike K. Pokorn (eds.), 223-236.
- Chomsky, Noam. 1965. *Aspects of the theory of syntax*. Massachusetts: The MIT Press.

- Chomsky, Noam. 1986. *Knowledge of language*. New York: Praeger Publisher.
- Chomsky, Noam. 2006. *Language and mind (3rd edition)*. Cambridge: Cambridge University Press.
- Chriss, Roger. 2006. *Translation as a profession*. Raleigh: Lulu.com.
- Churchman, Charles W. 1968. *The systems approach*. New York: Delta.
- Cieślicka, Anna. 2005. "Semantic priming effects in bilingual word fragment completion". *Poznań Studies in Contemporary Linguistics* 40: 111-133.
- Cieślicka, Anna. 2004. *On processing figurative language: towards a model of idiom comprehension in foreign language learners*. Poznań: Motivex.
- Cieślicka, Anna – Anna Ekert. 2009. "Investigating asymmetry in lexical processing with proficient Polish-English bilinguals". In: Arabski, Janusz – Adam Wojtaszek (eds.), 241-253.
- Clark, Eve V. 1978. "Awareness of language: Some evidence from what children say and do". In: Sinclair, Anne – Robert J. Jarvella – Willem J. M. Levelt (eds.), 17-43.
- Clyne, Michael G. 1980. "Triggering and language processing". *Canadian Journal of Psychology* 34,4: 400-406.
- Cole, Peter – Jerry Morgan (eds.). 1975. *Syntax and Semantics, 3: Speech Acts*. New York: Academic Press.
- Colina, Sonia. 2002. "Second language acquisition, language teaching and Translation Studies". *The Translator* 8,1: 1-24.
- Colina, Sonia. 2003a. "Towards an empirically-based translation pedagogy". In: Baer, Brian J. – Geoffrey S. Koby (eds.), 29-59.
- Colina, Sonia. 2003b. *Translation teaching from research to the classroom*. New York: Mc-Grow Hill.
- Cook, Guy. 2001. "Language teaching, use of translation". In: Baker, Mona (ed.), 117-120.
- Cook, Guy. 2010. *Translation in language teaching: An argument for reassessment*. Oxford: Oxford University Press.
- Cook, Vivian J. 1991. "The poverty-of-the-stimulus argument and multicompetence". *Second Language Research* 7,2: 103-117.
- Cook, Vivian J. 1992. "Evidence for multicompetence". *Language Learning* 42,4: 557-591.
- Cook, Vivian J. 2002. "Background to the L2 user." In: Cook, Vivian J. (ed.), 1-28.
- Cook, Vivian J. (ed.). 2002. *Portraits of the L2 user*. Amsterdam: John Benjamins.
- Cook, Vivian J. 2003. "The changing L1 in the L2 user's mind". In: Cook, Vivian J. (ed.), 1-18.
- Cook, Vivian J. (ed.). 2003. *Effects of the second language on the first*. Clevedon: Multilingual Matters.
- Cook, Vivian J. 2007. "The nature of the L2 user". *EUROSLA Yearbook* 7: 205-220.
- Costa, Albert – Mikel Santesteban. 2004. "Lexical access in bilingual speech production: evidence from language switching in highly proficient bilinguals and L2 learners". *Journal of Memory and Language* 50: 491-511.
- Cronin, Michael. 1995. "Keeping one's distance: Translation and the play of possibility". *TTR: Traduction, Terminologie, Rédaction*, 8,2: 227-243.
- Cronin, Michael. 2005. "Deschooling translation". In Tennent, Martha (ed.), 249-265.

- Crystal, David. 1986. *Listen to your child*. Harmondsworth: Penguin.
- Cummins, Jim. 1991. "Language development and academic learning". In: Malavé Lillian M. – Georges Duquette (eds.), 161-174.
- Dam, Helle V. – Jan Engberg – Heidrun Gerzymisch-Arbogast (eds.). 2005. *Knowledge systems and translation*. Berlin: Mouton de Gruyter.
- Damasio, Antonio R. 1994. *Descartes' error*. New York: Avon Books.
- Damasio, Antonio R. 1999. *The feeling of what happens*. New York: Harcourt Brace.
- Dancette, Jeanne. 1992. "Measurements of comprehension of the source text: theory and practice". In: Lewandowska-Tomaszczyk, Barbara – Marcel Thelen (eds.), 379-386.
- Danesi, Marcel. 1992. "Metaphorical competence in second language acquisition and second language teaching: the neglected dimension". In: Alatis, James E. (ed.), 489-500.
- Danesi, Marcel. 2003. *Second language teaching: a view from the right side of the brain*. Dordrecht: Kluwer Academic Publishers.
- Danks, Joseph H. – Gregory M. Shreve – Stephen B. Fountain – Michael K. McBeath (eds.). 1997. *Cognitive processes in translation and interpreting*. Thousand Oaks: Sage Publications.
- Davidson, Donald. 1980. *Essays on actions and events*. Oxford: Oxford University Press.
- Davidson, Richard J. – Gary Schwartz – David Shapiro (eds.). 1986. *Consciousness and self-regulation: advances in research and theory* (vol. 4). New York: Plenum Press.
- De Groot, Annette M.B. 1992. "Bilingual lexical representation: A closer look at conceptual representations". In: Frost, Ram – Leonard Katz (eds.), 389-412.
- De Groot, Annette M.B. 1997. "The cognitive study of translation and interpretation: Three approaches". In: Danks, Joseph H. – Gregory M. Shreve – Stephen B. Fountain – Michael K. McBeath (eds.), 25-56.
- De Groot, Annette M.B. 2000. "A complex-skill approach to translation and interpreting". In: Tirkkonen-Condit, Sonja – Ritta Jääskeläinen (eds.), 53-68.
- De Groot, Annette M.B. 2002. "Lexical representation and lexical processing in the L2 user". In: Cook, Vivian (ed.), 32-61.
- De Groot, Annette M.B. – Ingrid K. Christoffels. 2006. "Language control in bilinguals: Monolingual tasks and simultaneous interpreting". *Bilingualism: Language and Cognition* 9,2: 189-201.
- De Groot, Annette M.B. – Lucia Dannenburg – Janet G. van Hell. 1994. "Forward and backward word translation by bilinguals". *Journal of Memory and Language* 33: 600-629.
- De Groot, Annette M.B. – Rineke Keijzer. 2000. "What is hard to learn is easy to forget: The role of word concreteness, cognate status, and word frequency in foreign language vocabulary learning and forgetting". *Language Learning* 50: 1-56.
- De Groot, Annette M.B. – Judith F. Kroll (eds.). 1997. *Tutorials in bilingualism: Psycholinguistic perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates.

- De Groot, Annette M.B. – Gerard L.J. Nas. 1991. “Lexical representation of cognates and noncognates in compound bilinguals”. *Journal of Memory and Language* 30: 90-123.
- Delabastita, Dirk. 1993. *There’s a double tongue. An investigation into the translation of Shakespeare’s wordplay with special reference to Hamlet*. Amsterdam: Rodopi.
- Delisle, Jean. 1988. *Translation – an interpretative approach*. Ottawa: University of Ottawa Press.
- Delisle, Jean – Judith Woodsworth (eds.). 1995. *Translators through history*. Amsterdam: John Benjamins.
- De Ment, Terri L. – Raymond Buriel – Christina M. Villanueva. 2005. “Children as language brokers”. In: Rumjahn, Hossain – Salili Farideh (eds.), 255-272.
- De Oliveira Harden, Alessandra. 2009. “The rules of the game: Translation as a privileged learning resource”. In: Witte, Arnd – Theo Harden – Alessandra R. de Oliveira Harden (eds.), 361-374.
- Derrida, Jacques. 1992. “From des tours de Babel” [translated by Joseph F. Graham]. In: Schulte, Rainer – John Biguenat (eds.), 218-227.
- Dijkstra, Ton A. – Walter J.B. Van Heuven. 2002. “The architecture of the bilingual word recognition system: from identification to decision”. *Bilingualism, Language and Cognition* 5: 175-197.
- Dimitrova, Birgitta Englund. 2005. *Expertise and explicitation in the translation process*. Amsterdam: John Benjamins.
- Dimitrova, Brigitta Englund – Kerstin Jonasson. 1999. “Translation ability and translatorial competence: expert and novice use of dictionaries”. Paper presented at the Symposium on translation and Interpreting. Stockholm ([http://www2.tolk.su.se/Birgitta\\_Englund\\_Dimitrova/documents/englund\\_dimित्रोवा\\_jonasson.1999.pdf](http://www2.tolk.su.se/Birgitta_Englund_Dimitrova/documents/englund_dimित्रोवा_jonasson.1999.pdf)) (date of access 20 August 2010).
- Dodds, John. 1999. “Friends, false friends and foes or back to basics in L1 to L2 translation”. In: Anderman, Gunilla – Margater Rogers (eds.), 56-65.
- Dollerup, Cay – Anne Loddegaard (eds.). 1992. *Teaching translation and interpreting*. Amsterdam: John Benjamins.
- Dollerup, Cay – Annette Lindegaard (eds.). 1994. *Teaching translation and interpreting 2*. Amsterdam: John Benjamins.
- Donald, Merlin. 1991. *Origins of the modern mind: Three stages in the evolution of culture and cognition*. Harvard: Harvard University Press.
- Donald, Merlin. 2001. *A mind so rare: The evolution of human consciousness*. New York: Norton.
- Donald, Merlin. 2006. “Cognitive Cultural Networks”. Paper presented at the 2<sup>nd</sup> Culture Language and Mind Conference. Paris.
- Donald, Merlin. 2007a. “The slow process: A hypothetical cognitive adaptation for distributed cognitive networks”. *Journal of Physiology* 101: 214-222.
- Donald, Merlin. 2007b. “Consciousness and governance: from embodiment to enculturation – an interview”. In: Lars Andreassen – Line Brandt – Jes Vang (eds.), 68-83.

- Donald, Merlin. 2008. "How culture and brain mechanisms interact in decision making". In: Engel, Christoph – Wolf Singer (eds.), 191-225.
- Dornic, Stan. 1980. "Language dominance, spare capacity and perceived effort in bilinguals". *Ergonomics* 23,4: 369-377.
- Dudai, Yadin. 1989. *The neurobiology of memory: Concepts, findings, trends*. New York: Oxford University Press.
- Duff, Alan. 1981. *The third language*. Oxford: Pergamon Press.
- Durban, Chris. 2003. *Translation: Getting it right – A guide to buying translations*. Milton Keynes: Institute of Translation and Interpreting.
- Dynel, Marta (ed.). 2009. *Advances in discourse approaches*. Cambridge: Cambridge Scholars Publishing.
- Dziubalska-Kołodziej, Katarzyna (ed.). 2006. *IFAtuation: A life in IFA. A Festschrift for Professor Jacek Fisiak on the occasion of his 70th birthday*. Poznań: Wydawnictwo Naukowe UAM.
- Eichenbaum, Howard. 2002. *The cognitive neuroscience of memory: An introduction*. New York: Oxford University Press.
- Engel, Christoph – Wolf Singer (eds.). 2008. *Better than conscious? Decision-making, the human mind, and implications for institutions*. Cambridge, MA: The MIT Press.
- English, Horace B. – Ava C. English. 1958. *A comprehensive dictionary of psychological and psychoanalytical terms: A guide to usage*. New York: Mc Kay.
- Ericsson, Karl A. – Jacqui Smith (eds.). 1991. *Towards a general theory of expertise*. Cambridge: Cambridge University Press.
- Ericsson, Karl A. – Herbert. A. Simon. 1980. "Verbal reports as data". *Psychological Review* 87: 215-251.
- Ertmer, Peggy – Timothy Newby. 1996. "The expert learner, strategic, self-regulated, and reflective". *Instructional Science* 24,1: 1-24.
- Ervin, Susan M. – Charles E. Osgood. 1954. "Second language learning and bilingualism". *Journal of Abnormal Social Psychology*, Supplement 52: 139-146.
- Esch, Kees van – John Oliver St. (eds.). 2004. *New insights in foreign language learning and teaching*. Frankfurt: Peter Lang.
- Ewert, Anna. 2009. *L2 User's L1*. Poznań: Pracownia Wydawnicza Instytutu Filologii Angielskiej.
- Fabbro, Franco. 1999. *The neurolinguistics of bilingualism: An introduction*. East Sussex: Psychology Press Ltd.
- Fabiszak, Małgorzata (ed.). 2007. *Language and meaning*. Frankfurt: Peter Lang.
- Fauconnier, Giles. 1998. "Mental spaces, language modalities, and conceptual integration". In: Tomasello, Michael (ed.), 251-279.
- Fawcett, Peter. 1997. *Translation and language: Linguistic theories explained*. Manchester: St Jerome.
- Feltovich, Paul J. – Kenneth M. Ford – Robert R. Hoffman (eds.). 1997. *Expertise in context*. Cambridge, MA: MIT Press.

- Féraillleur-Dumoulin, Carline. 2009. *A Career in Language Translation*. Bloomington: Author House.
- Fillmore, Charles J. 1977. "Scenes-and-frames semantics". In: Zampolli, Antonio (ed.), 55-81.
- Firth, Alan – Johannes Wagner. 1997. "On discourse, communication, and (some) fundamental concepts in SLA research". *Modern Language Journal* 81: 285-300.
- Firth, Alan – Johannes Wagner. 2007. "Second/foreign language learning as a social accomplishment: Elaborations on a reconceptualized SLA". *Modern Language Journal* 91: 800-819.
- Fisher, Kurt – Sandra Pipp. 1984. "Processes of cognitive development: optimal level and skill acquisition". In: Steinberg, Robert J. (ed.), 45-80.
- Fisiak, Jacek (ed.). 1991. *Further insights into contrastive analysis*. Amsterdam: John Benjamins.
- Fisiak, Jacek (ed.). 2006. *English language, literature and culture*. Poznań: Uni-Druk.
- Flood, Robert L. 1999. *Rethinking the fifth discipline. Learning within the unknowable*. London: Routledge.
- Fodor, Jerry. 1975. *The language of thought*. Harvard: University Press.
- Fodor, Jerry. 2008. *The language of thought revisited*. Oxford: OUP.
- Forbach, Garry B. – Robert F. Stanners – Larry Hochhaus. 1974. "Repetition and practice effects in a lexical decision task". *Memory and Cognition* 2: 337-339.
- Fortunato, Israel (ed.). 1998. *Quelle formation pour le traducteur de l'an 2000?* Paris: Didier.
- Frank, Armin P. – Norbert Greiner – Theo Hermans – Haral Kittel – Werner Koller – José Lambert – Paul Fritz (eds.). 2004. *An International Encyclopaedia of Translation Studies, Art. 48. Vol. 1*. Berlin: Mouton de Gruyter.
- Fraser, Janet. 1999. "The translator and the word: The pros and cons of dictionaries in translation". In: Anderman, Gunilla – Margater Rogers (eds.), 25-34.
- Fraser, Janet. 2000. "The broader view: How freelance translators define translation competence". In: Schäffner, Christina – Beverly Adab (eds.), 51-62.
- Frith, Uta (ed.). 1980. *Cognitive processes in spelling*. London: Academic Press.
- Frost, Ram – Leonard Katz (eds.). 1992. *Orthography, phonology, morphology, and meaning*. Amsterdam: North Holland .
- Gambier, Yves – Jorma Tommola (eds.). 1993. *Translation and knowledge*. Turku: University of Turku Press.
- Gambier, Yves – Miriam Shlesinger – Radegundis Stolze (eds.). 2004. *Doubts and directions in Translation Studies*. Amsterdam: John Benjamins.
- Gardner, Robert C. 1979. "Social psychological aspects of second language acquisition. In: Giles, Howard – Robert N. St Clair (eds.), 193-220.
- Gardner, Howard – Michael Connell. 2000. "Response to Nicholas Allix". *Australian Journal of Education* 44: 288-293.
- Gass, Susan – Larry Selinker (eds.). 1983. *Language transfer in language learning*. Rowley, MA: Newbury House.



- Gatenby, Edward V. 1967 "Reasons for failure to learn a foreign language". In: Lee, William R. (ed.), 1-10.
- Genesee, Fred – Elena Nicoladis. 2006. "Bilingual acquisition". In: Hoff, Erika – Marilyn Shatz (eds.), 324-342.
- Gentzler, Edwin. 1993. *Contemporary translation theories*. New York: Routledge.
- Gerard, Linda D. – Don L. Scarborough. 1989. "Language specific lexical access of homographs by bilinguals". *Journal of Experimental Psychology: Learning, Memory, and Cognition* 15: 305-315.
- Gerloff, Pamela. 1986. "Second language learners' reports on the interpretive process: talk-aloud protocols of translation". In: House, Juliane – Shoshana Blum-Kulka (eds.), 243-262.
- Gerver, David – Wallace H. Sinaiko (eds). 1978. *Language interpretation and communication*. New York: Plenum Press.
- Giddens, Anthony. 1991. *Modernity and self-identity. Self and society in the late modern age*. Cambridge: Polity Press.
- Gile, Daniel. 1993. "Translation/interpretation and knowledge". In: Gambier, Yves – Jorma Tammola (eds.), 67-86.
- Gile, Daniel. 1995/2009. *Basic concepts and models for interpreter and translator training*. Amsterdam: John Benjamins.
- Gile, Daniel. 1997. "Conference interpreting as a cognitive management problem". In: Danks, Joseph E. – Gregory M. Shreve – Stephen B. Fountain – Michael K. McBeath (eds.), 196-214.
- Gile, Daniel. 2004. "Integrated problem and decision reporting as a translation training tool". *Journal of Specialized Translation* 2, ([http://www.jostrans.org/issue02/art\\_gile.php](http://www.jostrans.org/issue02/art_gile.php)) (date of access 14 March 2010).
- Gile, Daniel – Gyde Hansen – Nike K. Pokorn (eds.). 2010. *Why Translation Studies Matters*. Amsterdam: John Benjamins.
- Giles, Howard – Robert N. St Clair (eds). 1979. *Language and social psychology*. Oxford: Basil Blackwell.
- Girard, Denis (ed.). 1992. *Enseignement des langues dans le monde d'aujourd'hui*. Paris: Hachette.
- Goleman, Daniel. 1995. *Emotional intelligence*. New York: Bantam Books.
- Goleman, Daniel. 2011. *The brain and emotional intelligence: New insights*. Northampton: More than Sound.
- Gollan, Tamar H. – Judith F. Kroll. 2001. "Bilingual lexical access". In: Rapp Brenda (ed.), 321-345.
- Gollan, Tamar H. – Lori-Ann Acenas. 2004. "What is a TOT? Cognate and translation effects on tip-of-the-tongue states in Spanish-English and Tagalog-English bilinguals". *Journal of Experimental Psychology: Learning, Memory, and Cognition* 30: 246-269.
- Gollan, Tamar H. – Rosa I. Montoya – Christine Fennema-Notestine – Shaunna K. Morris. 2005. "Bilingualism affects picture naming but not picture classification". *Memory & Cognition* 33: 1220-1234.

- Gómez Hurtado, Isabel. 2006. Traducir, ¿capacidad innata o destreza adquirida? [Translating. Innate ability or acquired skill?]. Doctoral dissertation. Granada: University of Granada.
- González Davies, Maria. 2004. *Multiple voices in the translation classroom*. Amsterdam: John Benjamins.
- Gopher, Daniel. 1992. "The skill of attention control: acquisition and execution of attention strategies". In: Meyer, David E. – Sylvan Kornblum (eds.), 299-322.
- Gorlee, Dinda L. 1994. *Semiotics and the problem of translation*. Amsterdam: Atlanta.
- Green, Alison J.K. – Kenneth J. Gilhooley. 1992. "Empirical advances in expertise research". In: Keane, Mark T. – Kenneth J. Gilhooley (eds.), 45-70.
- Green, David 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.
- Green, David W. 1993. "Towards a model of L2 comprehension and production". In: Schreuder, Robert – Bert Weltens (eds.), 249-277.
- Green, David W. 1998. "Mental control of the bilingual lexico-semantic system". *Bilingualism: Language and Cognition* 1,2: 67-81.
- Green, David. 2000. "Control, activation and resource: a framework and a model for the control of speech in bilinguals". In: Wei, Li (ed.), 374-385.
- Grice, Paul. 1975. "Logic and conversation". In: Cole, Peter – Jerry Morgan (eds.), 41-58.
- Grosjean, Francis. 1982. *Life with two languages: An introduction to bilingualism*. Cambridge, MA: Harvard University Press.
- Grosjean, Francois. 1997. "The bilingual individual". *Interpreting* 2, 1-2: 163-187.
- Grosjean, Francois. 2001. "The bilingual's language modes." In: Nicol, Janet (ed.), 1-21.
- Grosjean, Francois. 2000. "Processing mixed languages: Issues, findings and models". In: Wei, Li (ed.), 408-434.
- Grosjean, Francois. 2002. "Interview". *The Bilingual Family Newsletter* 19,4: 4-7.
- Gouadec, Daniel. 2007. *Translation as a profession*. Amsterdam: John Benjamins.
- Gudykunst, William W.B. – Young Yun Kim. 1992. *Communicating with strangers: An approach to intercultural communication*. 2<sup>nd</sup> edition. New York: McGraw Hill Inc.
- Gutt, Ernst-August. 1991. *Translation and relevance: cognition and context*. Oxford: Blackwell.
- Hall, Joan K. – An Cheng – Matthew T. Carlson. 2006. "Reconceptualizing multicompetence as a theory of language knowledge". *Applied Linguistics* 27,2: 220-240.
- Halliday, Michael A.K. – John Gibbons – Howard Nicholas (eds.). 1990. *Learning, keeping and using language*. Amsterdam: John Benjamins.
- Hämäläinen, Raimo P. – Esa Saarinen (eds.). 2007. *Systems intelligence in leadership and everyday life*. Helsinki: University of Technology.
- Hamers, Josiane F. – Michel H. Blanc. 1990. *Bilinguality and bilingualism*. Cambridge, MA: Harvard University Press.
- Hansen, Gyde (ed.). 2002. *Empirical Translation Studies: Process and product*. Copenhagen: Samfundslitteratur.

- Hansen, Gyde. 2003. "Controlling the process". In : Alves, Fábio (ed.), 25-43.
- Hansen, Gyde. 2006. "Retrospective methods in translator training and translation research". *Journal of Specialized Translation* 5: 1-40. (<http://www.jostrans.org>) (date of access 20 May 2010).
- Hansen, Gyde. 2008. "The speck in your brother's eye – the beam in your own: Quality management in translation and revision". In: Hansen, Gyde – Andrew Chesterman – Heidrun Gerzymisch-Arbogast (eds.), 255-277.
- Hansen, Gyde – Andrew Chesterman – Heidrun Gerzymisch-Arbogast (eds.). 2008. *Efforts and models in interpreting and translation research. A tribute to Daniel Gile*. Amsterdam: John Benjamins.
- Hansen, Gyde – Kirsten Malmkjaer – Daniel Gile (eds.). 2004. *Claims, changes and challenges in Translation Studies*. Amsterdam: John Benjamins.
- Hansen, Kit. 2009. *Literacy and Second Language Oracy*. Oxford: Oxford University Press.
- Harden, Theo. 2009. "Accessing conceptual metaphors through translation". In: Witte, Arnd – Theo Harden – Alessandra Ramos de Oliveira Harden (eds.), 119-133.
- Harley, Birgit. 1986. *Age in second language acquisition*. Clevedon: Multilingual Matters.
- Haritos, Calliope. 2003. "Listening, remembering, and speaking in two languages: How did you do that?" *Bilingual Research Journal* 27,1: 73-99.
- Harré, Rom – Roger Lamb (eds). 1983. *The encyclopedic dictionary of psychology*. Massachusetts: The MIT Press.
- Harris, Brian. 1977. "The importance of natural translation". *Working papers in bilingualism* 12: 96-114.
- Harris, Brian. 1980. "How a three-year-old translates". In: Afendras, Evangelos A. (ed.), 370-393.
- Harris, Brian. 1992. "Natural translation: A reply to Hans P. Krings". *Target* 4,1: 97-103.
- Harris, Brian. 1997. "Foreword: A landmark in the evolution of interpreting". In: Carr Silvana E. – Roda P. Roberts – Aideen Dufour – Dini Steyn (eds.), 1-6.
- Harris, Brian – Bianca Sherwood. 1978. "Translating as an innate skill". In: Gerver, David – Wallace H. Sinaiko (eds.), 155-170.
- Harris, Richard J. (ed.). 1992. *Cognitive processing in bilinguals*. Amsterdam: North-Holland.
- Hatano, Giyoo – Kayoko Inagaki. 1992. "Desituating cognition through the construction of conceptual knowledge". In: Light, Paul – George Butterworth (eds.), 115-133.
- Hatim, Basil – Ian Mason. 1997. *The Translator as communicator*. London: Routledge.
- Hayes, John R. 1996. "A new framework for the understanding of cognition and affect in writing". In: Levy, Michael C. – Sarah Ransdell (eds.), 1-28.
- Healey, Frank. 1978. "Translators made not born?". *The Incorporated Linguist* 17,3: 54-58.
- Hebb, Donald O. 1949. *The organization of behavior*. New York: Wiley & Sons.

- Heid, Manfred (ed.). 1981. *New Yorker Werkstattgespräch 1980: Beziehungen zwischen Sprachrezeption und Sprachproduktion im Fremdsprachenunterricht*. Munich: Goethe House.
- Hejwowski, Krzysztof. 1992. *Psycholingwistyczny model procesu tłumaczenia*. Unpublished doctoral dissertation. Warszawa: Uniwersytet Warszawski.
- Hejwowski, Krzysztof. 2004. *Kognitywno-komunikacyjna teoria przekładu*. Warszawa: Wydawnictwo Naukowe PWN.
- Henderson, John S. 1987. *Personality and the linguist*. Bradford: University of Bradford Press.
- Hentschel, Elke. 2009. "Translation as an inevitable part of foreign language acquisition". In: Witte, Arnd – Theo Harden – Alessandra Ramos de Oliveira Harden (eds.), 15-30.
- Herdina, Philip – Ulrike Jessner. 2002. *A Dynamic model of multilingualism. Perspectives of change in psycholinguistics*. Clevedon: Multilingual Matters.
- Heredia, Roberto. 1997. "Bilingual memory and hierarchical models: A case for language dominance". *Current Directions in Psychological Science* 6: 34-39.
- Heredia, Roberto. 2008. "Mental models of bilingual memory". In: Altariba, Jeanette – Roberto Heredia (eds.), 39-67.
- Heredia, Roberto – Jeffrey Brown. 2004. "Bilingual memory". In: Bhatia, Tej K.– William C. Ritchie (eds.), 225-249.
- Hermans, Theo. 1991. "Translational norms and correct translations". In: Leuven-Zwart, Kitty M. – Ton Naaijken (eds.), 155-169.
- Hickey, Leo. 1998. *The pragmatics of translation*. Clevedon: Multilingual Matters.
- Hickey, Raymond – Stanislaw Puppel (eds.). 1997. *Language history and linguistic modeling. A Festschrift for Jacek Fisiak on his 60th birthday Vol. II*. Berlin: Mouton de Gruyter.
- Hinkel, Eli (ed.). 2005. *Handbook of research in second language teaching and learning*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Hoff, Erika – Marilyn Shatz (eds.). 2006. *Handbook of language development*. Oxford: Blackwell.
- Hoffman, Robert (ed.). 1992. *The psychology of expertise. Cognitive research and empirical AI*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Hoffman, Robert R. 1997. "The cognitive psychology of expertise and the domain of interpreting". *Interpreting* 2,1-2: 189-230.
- Holmes, James. 1988/1994. *Translated! Papers on literary translation and Translation Studies*. Amsterdam: Rodopi.
- Holquist, Michael. 2003. "What's the ontological status of bilingualism". In: Sommer, Doris (ed.), 21-34.
- Holz Mänttari, Justa. 1984. *Translatorsches Handeln. Theorie und Methode*. Helsinki: Suomalainen Tiedeakatemia.
- Holz-Mänttari (ed.). 1988. *Translationstheorie – Grundlagen und Function*. Tampere: University of Tampere.
- House, Juliane. 1977. *A model for translation quality assessment*. Tübingen: Narr.

- House, Juliane. 1986. "Acquiring translational competence in interaction". In: House, Juliane – Shoshana Blum-Kulka (eds.), 179-191.
- House, Juliane. 1997. *Translation quality assessment: a model revisited*. Tübingen: Gunter Narr Verlag.
- House, Juliane. 2001. "Translation quality assessment: linguistic description versus social evaluation". *META* 46,2: 243-257.
- House, Juliane. 2009. "Quality of translation". In: Baker, Mona – Gabriela Saldanha (eds.), 252-256.
- House, Juliane – Shoshana Blum-Kulka (eds.). 1986. *Interlingual and intercultural communication*. Tübingen: Narr.
- Howatt, Anthony P. 1984. *A history of English language teaching*. Oxford: Oxford University Press.
- Hönig, Hans G. 1990. "Sagen, was macht nicht weiss – wissen was macht nicht sagt. Überlegungen zur übersetzerischen Intuition". In: Arntz, Reiner – Gisela Thome (eds.), 152-161.
- Hönig, Hans G. 1991. "Holmes' 'Mapping Theory' and the landscape of mental translation processes". In: Leuven-Zwart, Kitty M. – Ton Naaijken (eds.), 77-89.
- Humboldt, Wilhelm von. 1903-1936. *Wilhelm von Humboldts Werke* (edited by Albert Leitzmann). Berlin: Behr.
- Hymes, Dell. 1971. *On communicative competence*. Philadelphia: University of Pennsylvania Press.
- Ivanova, Adelina. 1998. "Educating the 'language elite'. Teaching translation for translator training". In: Malmkjaer, Kirsten (ed.), 92-109.
- Jakobsen, Arnt L. 1994. "Starting from the (other) end: Integrating translation and text production". In: Dollerup, Cay – Annette Lindegaard (eds.), 143-150.
- Jakobsen, Arnt L. 2002. "Orientation, segmentation and revision in translation". In: Gyde Hansen (ed.), 191-204.
- Jakobsen, Arnt L. 2005. "Investigating expert translators' processing knowledge". In: Dam, Helle V. – Jan Engberg – Heidrun Gerzymisch-Arbogast (eds.), 173-189.
- Jakobsen, Arnt L. 2006. "Research methods in translation – Translog". In: Sullivan, Kirk P.H. – Eva L. Lindgren (eds.), 95-105.
- Jakobsen, Arnt L. 2011. "What's in the eye of translators?: Translog with eyetracking". In: Schmitt, Peter – Susann Herold – Anette Weilandt (eds.), 343-353.
- Jakobsen, Arnt L. – Lasse Schou. 1999. "Translog documentantation". *Copenhagen Studies in Language* 24: 149-184.
- Jakobson, Roman. 1959. "On linguistic aspects of translation". In: Brower, Reuben A. (ed.), 232-239.
- Jääskeläinen, Riitta. 1989. "Translation assignment in professional versus non-professional translation: a think aloud protocol study". In: Séguinot, Candance (ed.), 87-98.
- Jääskeläinen, Riitta. 1996. "Hard work will bear beautiful fruit. A comparison of two think-aloud protocol studies". *META* 41,1: 61-74.

- Jääskeläinen, Riitta. 1999. *Tapping the process: an explorative study of the cognitive and affective factors involved in translating*. Joensuu: University of Joensuu.
- Jääskeläinen, Riitta. 2010. "Are all professionals experts? Definitions of expertise and reinterpretation of research evidence in process studies". In: Shreve, Gregory, M. – Erik Angelone (eds.), 213-227.
- Jääskeläinen, Riitta – Tirkkonen-Condit, Sonja. 1991. "Automatised processes in professional vs. non-professional translation: A think-aloud protocol study". In: Tirkkonen-Condit, Sonja (ed.), 89-109.
- Jarvis, Scott – Aneta Pavlenko. 2008. *Crosslinguistic influence in language and cognition*. New York: Routledge.
- Jensen, Astrid. 1999. "Time pressure in translation". *Copenhagen Studies in Language* 24: 103-119.
- Jensen, Astrid – Arnt L. Jakobsen. 2000. "Translating under time pressure". In: Chesterman, Andrew – Natividad Gallardo San Salvador – Yves Gambier (eds.), 105-116.
- Jensen, Eric. 1998. *Teaching with the brain in mind*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Joerges, Bernward. 1977. "Wissenschaftliche Kreativität: empirische und wissenschaftliche Hinweise". In: Schneider, Johann – Marianne Schneider-Düker (eds.), 143-182.
- Jonasson, Kerstin. 1998. "Degree of text awareness in professional vs. non-professional translators". In: Beylard-Ozeroff, Ann – Jana Králová – Barbara Moser-Mercer (eds.), 189-200.
- Jones, Roderic. 2002. *Conference interpreting explained*. Manchester: St. Jerome Publishing.
- Jung, Carl G. 1923/1971. *The collected works of C.G. Jung: Vol 6. Psychological types*. Princeton: Princeton University Press.
- Kalat, James. 2007. *Biological psychology*. Belmont: Wadsworth.
- Kalat, James. 2010. *Introduction to psychology*. 9th edition. Belmont: Wadsworth.
- Károly, Krisztina – Ágota Fóris (eds.). 2005. *New trends in Translation Studies*. Budapest: Akadémiai Kiadó.
- Keane, Mark T. – Kenneth J. Gilhooley (eds.). 1992. *Advances in the psychology of thinking*. Hove, UK: Hemel.
- Kearns, John. 2006. "In the broader context: Reflections on curriculum design principles for training translators". *Translation Ireland. New Vistas in Translator and Interpreter Training* (Special issue) 17, 1: 205-218.
- Kearns, John. 2008. "The academic and the vocational in translator education". In: Kearns John (ed.), 184-211.
- Kearns, John (ed.). 2008. *Translator and interpreter training: Issues, methods and debates*. London: Continuum.
- Keckes, Istvan – Liliana Albertazzi (eds.). 2007. *Cognitive aspects of bilingualism*. New York: Springer.

- Kecskes, Istvan – Tunde Papp. 2000. *Foreign language and mother tongue*. Mahwah: Lawrence Erlbaum.
- Kelly, Dorothy. 2005. *A handbook for translator trainers*. Manchester: St. Jerome Publishers.
- Kiraly, Donald. 1995. *Pathways to translation: pedagogy and process*. Kent, Ohio: Kent State University Press.
- Kiraly, Donald. 1997. "Think-Aloud Protocols and the construction of a professional translator self-concept". In: Danks, Joseph H. – Gregory, M. Shreve – Stephen, B. Fountain – Michael, K. McBeath (eds.), 137-160.
- Kiraly, Donald. 2000. *A social constructivist approach to translator education*. Manchester: St. Jerome Publishing.
- Kiraly, Donald. 2005a. "Situating praxis in translator education". In: Károly, Krisztina – Ágota Fóris (eds.), 117-138.
- Kiraly, Donald. 2005b. "Project-based learning: A case for situated translation". *META* 50,4: 1098-1111. (<http://www.erudit.org/revue/meta/2005/v50/n4/012063ar.html>) (date of access 10 March 2010).
- Kirsner, Kim – Marilyn C. Smith – R.S. Lockhart – M.L. King – M. Jain. 1984. "The bilingual lexicon: Language-specific units in an integrated network". *Journal of Verbal Learning and Verbal Behavior* 23: 519-539.
- Kirsner, Kim – Craig Spielman. 1998. "Introduction and overview". In: Kirsner, Kim – Craig Spielman – Murray Maybery – Angela O'Brien-Malone – Mike Anderson – Colin MacLeod (eds.), 3-12.
- Kirsner, Kim – Craig Spielman – Murray Maybery – Angela O'Brien-Malone – Mike Anderson – Colin MacLeod (eds.). 1998. *Implicit and explicit mental processes*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Klaudy, Kinga. 2003. *Languages in translation. Lectures on the theory, teaching and practice of translation*. Budapest: Scholactica.
- Klir, George J. 2001. *Facets of Systems Science*. New York: Plenum Publishers.
- Koh, Hian Ch. 1996. "Testing hypothesis of entrepreneurial characteristics". *Journal of Managerial Psychology* 11,3: 12-25.
- Kolers, Paul A. 1963. "Interlingual word association". *Journal of Verbal Learning and Verbal Behavior* 2: 291-300.
- Kolers, Paul A. 1973. "Translation and bilingualism". In: Miller, George A. (ed.), 280-290.
- Koller, Werner. 1972. *Grundprobleme der Übersetzungstheorie. Unter besonderer Berücksichtigung schwedisch-deutscher Übersetzungsfälle*. Bern: Francke.
- Koller, Werner. 1979. *Einführung in die Übersetzungswissenschaft*. Heidelberg: Quelle & Meyer.
- Koller, Werner. 1992. *Einführung in die Übersetzungswissenschaft, Völlig neu bearbeitete Auflage*. Heidelberg, Wiesbaden: Quelle & Meyer.
- Komissarov, Vilen. N. 1991. "Language and culture in translation: Competitors or collaborators?" *TTR: Traduction, Terminologie, Rédaction* 4,1: 33-47.
- Kopczyński, Andrzej. 1994. "Quality in conference interpreting: Some pragmatic problems". In: Snell-Hornby, Mary – Franz Pöchhacker – Klaus Kaindl (eds.), 189-198.

- Kordes, Hagen. 1990. "Intercultural learning at school: Limits and possibilities". In: Buttjes, Dieter – Michael Byram (eds.), 287-305.
- Korunka, Christian – Hermann Frank – Manfred Lueger – Josef Mugler. 2003. "The entrepreneurial personality in the context of resources, environment, and the startup process – a configurational approach". *Entrepreneurship Theory and Practice* 28,1: 23-42.
- Korzeniowska, Aniela – Piotr Kuhlaczak. 1994. *Successful Polish-English translation*. Warszawa: Wydawnictwo Naukowe PWN.
- Korzeniowska, Aniela. 1998. *Explorations in Polish-English mistranslation problems*. Warszawa: Wydawnictwo Uniwersytetu Warszawskiego.
- Kramsch, Claire. 1993. *Context and culture in language teaching*. Oxford: Oxford University Press.
- Kramsch, Claire. 2009. *The multilingual subject. What language learners say about their experience and why it matters*. Oxford: Oxford University Press.
- Krings, Hans P. 1986a. "Translation problems and translation strategies of advanced German learners of French (L2)". In: House, Juliane – Shoshana Blum-Kulka (eds.), 263-276.
- Krings, Hans P. 1986b. *Was in den Köpfen von Übersetzern vorgeht*. Tübingen: Gunter Narr.
- Krings, Hans P. 1988. "Blick in die black box: Eine Fallstudie zum Übersetzungsprozess bei Berufsübersetzern". In: Arntz, Reiner (ed.), 393-411.
- Krashen, Stephen. 1982. *Principles and practice in second language acquisition*. Oxford: Pergamon Press.
- Kroll, Judith F. 1993. "Accessing conceptual representations for words in a second language". In: Schreuder, Robert – Bert Weltens (eds.), 53-82.
- Kroll, Judith – Annette M.B. De Groot. 1997. "Lexical and conceptual memory in the bilingual: Mapping form to meaning in two languages". In: Kroll, Judith – Annette M.B. De Groot (eds.), 169-197.
- Kroll, Judith – Annette M.B. De Groot (eds.). 1997. *Tutorials in bilingualism: Psycholinguistic perspectives*. Mahwah: Lawrence Erlbaum Publishers.
- Kroll, Judith F. – Annette M.B. De Groot (eds.). 2005. *Handbook of bilingualism: Psycholinguistic approaches*. New York: Oxford University Press.
- Kroll, Judith F. – Jared A. Linc. 2007. "Representation and skill in second language learners and proficient bilinguals". In: Kecskes, Istvan – Liliana Albertazzi (eds.), 237-269.
- Kroll, Judith F. – Alexandra Sholl. 1992. "Lexical and conceptual memory in fluent and nonfluent bilinguals." In: Harris, Richard J. (ed.), 191-203.
- Kroll, Judith F. – Erika Stewart. 1994. "Category interference in translation and picture naming: evidence for asymmetric connections between bilingual memory representations." *Journal of Memory and Language* 33: 149-174.
- Kuliniak, Joanna. 2009. *On the use and overuse of dictionaries by inexperienced translators*. Unpublished BA thesis. Poznań. Adam Mickiewicz University.



- Kurz, Ingrid. 2000. "Translators and interpreters: different learning styles?". *Across Languages and Cultures* 1,1: 71-83.
- Kusssmaul, Paul. 1991. "Creativity in the translation process. Empirical approaches". In: Leuven-Zwart, Kitty M. – Ton Naaijken (eds.), 91-101.
- Kusssmaul, Paul. 1995. *Training the translator*. Amsterdam: John Benjamins.
- Kusssmaul, Paul. 2005. "Translation through visualization". *META* 50,2: 378-391.
- Kusssmaul, Paul – Sonja Tirkkonen-Condit. 1995. "Think-aloud protocol analysis in Translation Studies. *TTR: Traduction, Terminologie, Rédaction* 8,1: 177-199.
- Lado, Robert. 1957. *Linguistics across cultures: Applied linguistics for language teachers*. Michigan: University of Michigan Press.
- Lado, Robert. 1964. *Language teaching: A scientific approach*. New York: McGraw Hill.
- La Heij, Wido. 2005. "Selection processes in monolingual and bilingual lexical access". In: Kroll, Judith F. – Annette M.B. De Groot (eds.), 289-307.
- Lakoff, George. 1982. *Categories and cognitive models*. Trier: LAUT.
- Lambert, Wallace M. 1978. "Psychological approaches to bilingualism, translation and interpretation". In: Gerver, David – Wallace H. Sinaiko (eds.), 131- 143.
- Landers, Clifford, E. 2001. *Literary translation: A practical guide*. Clevedon: Multilingual Matters.
- Lantolf, James P. (ed). 2000. *Sociocultural theory and second language learning*. Oxford: Oxford University Press.
- Lars, Andreassen – Line Brandt – Jes Vang (eds.). 2007. *Cognitive semiotics*. Oxford: Peter Lang.
- Larson, Mildred. 1984. *Meaning-based translation: a guide to cross-language equivalence*. Lanham: University of America Press.
- Larson, Mildred (ed.). 1991. *Translation: theory and practice, tension and interdependence*. New York: Binghampton.
- Lauffer, Sabine. 2002. "The translation process: an analysis of observational methodology". *CAD. De Tradução* 2,10: 59-75. (<http://www.periodicos.ufsc.br/index.php/traducao/article/viewFile/6144/5702>) (date of access 18 May 2010).
- Lee, William R. (ed.). 1967. *E.L.T. Selections: Articles from the journal English Language Teaching*. London: Oxford University Press.
- Leonardi, Vanessa. 2010. *The role of pedagogical translation in second language acquisition*. Bern: Peter Lang.
- Leopold, Werner F. 1939-1949. *Speech development of a bilingual child. A linguist's record* (4 volumes). Evanston, IL: Northwestern University Press.
- Leuven-Zwart, Kitty M. – Ton Naaijken (eds.). 1991. *Translation Studies: The state of the art. Proceedings of the first James Holmes symposium on Translation Studies*. Amsterdam: Rodopi.
- Levelt, Willem J.M. 1989. *Speaking: From intention to articulation*. Cambridge, MA: The MIT Press.
- Levelt, Willem J.M. 2001. "Spoken word production: A theory of lexical access". *PNAS. Proceedings of the National Academy of Sciences* 98,23: 13464-13471.

- Levy, Michael C. – Sarah Ransdell (eds.). 1996. *The science of writing. Theories, methods, individual differences, and applications*. Mahwah, NJ: Lawrence Erlbaum.
- Levý, Jiri. 1967. "Translation as a Decision Process". In: Venuti (ed.), 148-159.
- Lewandowska-Tomaszczyk, Barbara. 1985. "Współczesne prądy w językoznawstwie a teoria tłumaczenia". *Folia Linguistica 21, Acta Universitatis Lodziensis*: 59-71.
- Lewandowska-Tomaszczyk, Barbara. 1990. "Overt and hidden negations in translation". In: Thelen, Marcel – Barbara Lewandowska-Tomaszczyk (eds.), 234-244.
- Lewandowska-Tomaszczyk, Barbara. 2004. "Lexical problems of translation". In: Frank, Armin P. – Norbert Greiner – Theo Hermans – Harald Kittel – Werner Koller – José Lambert – Paul Fritz (eds.), 455-465.
- Lewandowska Tomaszczyk, Barbara – Marcel Thelen (eds.). 1992. *Translation and meaning. Part 2*. Rijkshogeschool Maastricht: Faculty of Translation and Interpreting.
- Light, Paul – George Butterworth (eds.). 1992. *Context and cognition*. Hillsdale: Lawrence Erlbaum.
- Ljudskanov, Alexandre. 1969. *Traduction humaine et traduction mécanique*. Paris: Dunod.
- Lowe, Pardee. 1987. "Revising the ACTFL/ETS scale for a new purpose: rating skill in translating". In : Rose, Marilyn G. (ed.), 53-61.
- Lörscher, Wolfgang. 1986. "Linguistic aspects of translation processes: towards an analysis of translation performance." In: House, Juliane – Shoshana Blum-Kulka (eds.), 277-292.
- Lörscher, Wolfgang. 1991. *Translation performance, translation process and translation strategies*. Tübingen: Narr.
- Lörscher, Wolfgang. 1992. "Form- and sense-oriented approaches to translation". In: Lewandowska Tomaszczyk, Barbara – Marcel Thelen (eds.), 403-414.
- Lörscher, Wolfgang. 1996. "A psycholinguistic analysis of translation processes". *META* 41,1: 26-32.
- Lörscher, Wolfgang. 1997. "Translation process analysis and its implications for translation teaching". In: Hickey, Raymond – Stanislaw Puppel (eds.), 2005-2018.
- Mackenzie, Rosemary. 1998. "Creative problem-solving and translator training". In: Beylard-Ozeroff, Ann – Jana Králová – Barbara Moser-Mercer (eds.), 201-206.
- Mackintosh, Kristen. 1998. "An empirical study of dictionary use in L2-L1 translation". In: Atkins, Sue (ed.), 123-144.
- Mackenzie, Rosemary. 2004. "The competencies required by the translator's roles as professionals". In: Malmkjaer, Kirsten (ed.), 31-81.
- Malakoff, Marguerite E. 1992. "Translation ability: A natural and metalinguistic skill". In: Harris Richard J. (ed.), 515-529.
- Malakoff, Marguerite – Kenji Hakuta. 1991. "Translation skill and metalinguistic awareness in bilinguals". In: Bialystok, Ellen (ed.), 141-166.

- Malavé, Lillian M. – Georges Duquette (eds.). 1991. *Language, culture and cognition*. Clevedon: Multilingual Matters.
- Malmkjaer, Kirsten (ed.). 1998. *Translation and language teaching: language teaching and translation*. Manchester: St. Jerome Publishing.
- Malmkjaer, Kirsten (ed.). 2004. *Translation in undergraduate degree programmes*. Amsterdam: John Benjamins.
- Malmkjaer, Kirsten. 2005. *Linguistics and the language of translation*. Edinburgh: Edinburgh University Press.
- Marcus, Gary F. 2001. *The algebraic mind: Integrating connectionism and cognitive science (Learning, development, and conceptual change)*. Cambridge, MA: The MIT Press.
- Marian, Viorica – Michael Spivey. 2003. “Competing activation in bilingual language processing: within- and between-language competition”. *Bilingualism: Language and Cognition* 6,2: 97-115.
- Martin, Ricardo M. 2006. “Expertise and environment in translation”. Unpublished paper presented at the Second IATIS Conference. (<http://www.petraweb.org/Munoz%20Expertise%20and%20Environment%20in%20Translation.pdf>) (date of access 28 February 2010).
- Massey, Gary. 2005. “Process-oriented translator training and the challenge for e-learning”. *META* 50,2: 626-633.
- Matsumoto, David. 2000. *Culture and psychology: People around the world*. Belmont, CA: Wadsworth.
- McClelland, David. 1973. “Testing for competence rather than “intelligence”. *American Psychologist* 28,1: 1-14.
- McKay, Corrine. 2006. *How to succeed as a freelance translator*. Lulu.com: Two Rat Press.
- McLaughlin, Barry – Roberto Heredia. 1996. “Information processing approaches to research on second language acquisition and use”. In: Ritchie, William – Tej Bhatia (eds.), 213-228.
- Meyer, David E. – Sylvan Kornblum (eds.). 1992. *Synergies in experimental psychology, artificial intelligence and cognitive neuroscience*. Cambridge, MA: The MIT Press.
- Miller, George A. (ed.). 1973. *Communication, language, and meaning, psychological perspectives*. New York: Basic Books, Inc. Publishers.
- Mitchell, Rosamond – Florence Myles. 1998/2006. *Second Language Learning Theories*. London: Arnold.
- Mora, Jill. K. 2007. “Metalinguistic awareness as defined through research”. (<http://coe.sdsu.edu/people/jmora/moramodules/MetaLingResearch.htm>) (date of access 28 October 2009).
- Morales, Alejandro – William, E. Hanson. 2005. “Language brokering: an integrative review of the literature”. *Hispanic Journal of Behavioral Sciences* 27,4: 471-503.

- Morton, John. 1980. "The logogen model and orthographic structure". In: Frith, Uta (ed.), 117-133.
- Mossop, Brian. 2001. *Revising and editing for translators*. Manchester: St. Jerome Publishing.
- Mossop, Brian. 2007. "Empirical studies of revision: what we know and need to know". ([http://www.jostrans.org/issue08/art\\_mossop.pdf](http://www.jostrans.org/issue08/art_mossop.pdf)) (date of access 15 March 2010).
- Neubert, Albrecht. 1985. *Text and translation*. Leipzig: Enzyklopädie.
- Neubert, Albrecht. 1992. "Competence in translation: a complex skill, how to study and how to teach it". In: Snell-Hornby, Mary – Franz Pöchhacker – Klaus Kaindl (eds.), 411-420.
- Neubert, Albrecht. 1997. "Postulates for a theory of translation". In: Danks, Joseph H. – Gregory M. Shreve – Stephen B. Fountain – Michael K. McBeath (eds.), 1-24.
- Neubert, Albrecht. 2000. "Competence in language, languages, and in translation". In: Schäffner, Christine – Beverly Adab (eds.), 3-18.
- Neumann, John Von – Oscar Morgenstern. 1944. *The theory of games and economic behavior*. Princeton: Princeton University Press.
- Newson, Dennis. 1998. "Translation and foreign language learning". In: Malmkjaer (ed.), 63-68.
- Newmark, Peter. 1969. "Some notes on translation and translators". *Incorporated Linguist* 12,1: 9-15.
- Newmark, Peter. 1988. *A Textbook of translation*. New York: Prentice Hall.
- Nicol, Janet (ed.). 2001. *One mind, two languages: Bilingual language processing*. Oxford: Blackwell.
- Nida, Eugene A. 1964. *Towards a science of translating*. Leiden: E. J. Brill.
- Nida, Eugene A. 1981. "Translators are born not made". *Babel* 15,4: 214-215.
- Nida, Eugene A. 2001. *Contexts in translating*. Amsterdam: John Benjamins.
- Nida, Eugene A. 2002. "Translators confrontations with false ideas about language". (<http://translatoruy.files.wordpress.com/2009/12/nida-european-commission-translation-service.pdf>) (date of access 10 January 2010).
- Norberg, Ulf. 2003. *Übersetzen mit doppeltem skopos. Eine empirische Prozess und Produktstudie*. Uppsala: Uppsala University Library.
- Nord, Christine. 1988. *Textanalyse und Übersetzen*. Heilderberg: Groos.
- Nord, Christine. 1991. *Text analysis in translation*. Amsterdam: Rodopi.
- Nord, Christiane. 2005. *Text analysis in translation: Theory, methodology and dydactic application*. Amsterdam: Rodopi.
- Norman, Don A. – Tim Shallice. 1986. "Attention to action: willed and automatic control of behaviour". In: Davidson, Richard J. – Gary Schwartz, Gary – David Shapiro (eds.), 1-18.
- Odlin, Terence. 1989. *Language transfer: cross-linguistic influence in language learning*. Cambridge: Cambridge University Press.
- O'Malley, Michael J. – Anna U. Chamot. 1990. *Learning strategies in second language acquisition*. Cambridge: Cambridge University Press.

- Orozco, Mariana – Amparo Hurtado Albir. 2000. “Measuring translation competence acquisition”. *META* 47,3: 375-402.
- PACTE. 2000. “Acquiring translation competence: Hypotheses and methodological problems in a research project”. In: Beeby, Allison – Doris Ensinger – Marisa Presas (eds.), 99-106.
- PACTE. 2003. “Building a translation competence model”. In: Alves, Fabio (ed.), 43-66.
- Pagano, Adriana – Celia Magalhães – Fabio Alves (eds.). 2005. *Competência em tradução: cognição e discurso*. Belo Horizonte: Editora UFMG.
- Paradis, Michel. 1992. “Neurosciences et apprentissage des langues.” In: Girard, Denis (ed.), 21-31.
- Paradis, Michel. 1994. “Toward a neurolinguistic theory of simultaneous translation: The framework. *International Journal of Psycholinguistics* 10: 319-335.
- Paradis, Michel. 1997. “The cognitive neuropsychology of bilingualism”. In: De Groot, Annette M.B. – Judith F. Kroll (eds.), 331-354.
- Paradis, Michel. 1998. Neurolinguistics of bilingualism and the teaching of languages”. ([www.semioticon.com/virtuals/multimodality/paradis.pdf](http://www.semioticon.com/virtuals/multimodality/paradis.pdf)) (date of access 10 March 2008).
- Paradis, Michel. 2004. *A neurolinguistic theory of bilingualism*. Amsterdam: John Benjamins.
- Paradis, Michel. 2005. “Introduction to part IV. Aspects of bilingualism”. In: Kroll, Judith F. – Annette M.B. De Groot (eds.), 411-415.
- Paradis, Michel. 2007. “The neurofunctional components of the bilingual cognitive system”. In: Kecskes, Istvan – Liliana Albertazzi (eds.), 3-28.
- Paradis, Michel. 2009. *Declarative and procedural determinants of second languages*. Amsterdam: John Benjamins.
- Paradis, Michel – Marie-Claire Goldblum – Raouf Abidi. 1982. “Alternate antagonism with paradoxical translation behaviour in two bilingual aphasic patients”. *Brain and Language*, 15,1: 55-69.
- Pavlenko, Aneta. 1999. “New approaches to concepts in bilingual memory”. *Bilingualism: Language and Cognition* 2: 209-230.
- Pavlenko, Aneta. 2005. “Bilingualism and thought”. In: Kroll, Judith – Annette M.B. De Groot (eds.), 433-453.
- Pavlenko, Aneta (ed.). 2009. *The bilingual mental lexicon: Interdisciplinary approaches*. Bristol: Multilingual Matters.
- Pavlenko, Aneta – Adrian Blackledge – Ingrid Piller – Marya Teutsch-Dwyer (eds.). 2001. *Multilingualism, second language learning and gender*. Berlin: Mouton de Gruyter.
- Pavlenko, Aneta – James P. Lantolf. 2000. “Second language learning as participation and the (re)construction of selves”. In: Lantolf James P. (ed), 155-177.
- Pawlak, Mirosław (ed.). 2008. *Investigating English language learning and teaching*. Poznań & Kalisz: Faculty of Fine Arts in Kalisz /Adam Mickiewicz University in Poznań.
- Paz, Ottavio. 1971. *Traducción: Literatura y Literalidad*. Barcelona: Tusquets.

- Peal, Elizabeth – Wallace E. Lambert. 1962. "The relationship of bilingualism to intelligence". *Psychological Monographs: General and Applied* 76, 27: 1-23.
- Pellatt, Valerie. 2002. "Anaphoric resolution of zero pronouns in Chinese in translation and reading comprehension". Unpublished doctoral dissertation. Edinburgh: Edinburgh University.
- Pellatt, Valerie. 2009. "Translation as a reading comprehension test: Schemata and the role of the 'write it down protocol'". In: Witte, Arnd – Theo Harden – Alessandra Ramos de Oliveira Harden (eds.), 343-357.
- Penfield, Wilder G. 1953. "A consideration of the neurophysiological mechanisms of speech and some educational consequences". *Proceedings of the American Academy of Arts and Science* 82,5: 201-214.
- Penfield, Wilder G. – Lamar Roberts. 1959. *Speech and brain mechanisms*. New York: Atheneum Press.
- Perdek, Magdalena. 2011. *English phrasal verbs in translation: A lexicographic and corpus study of equivalence*. Unpublished doctoral dissertation. Poznań. Adam Mickiewicz University.
- Pimsleur, Paul – Daniel J. Reed – Charles W. Stansfield. 2004. *Pimsleur language aptitude battery: Manual, 2004 Edition*. Bethesda, MD: Second Language Testing, Inc.
- Ping, Ke. 2009. "Machine Translation". In: Baker, Mona – Gabriela Saldanha (eds.), 162-169.
- Pinker, Steven. 2007. *The stuff of thought*. New York: Viking.
- Piotrowska, Maria. 2002. *A compensational model for strategy and techniques in teaching translation*. Kraków: Wydawnictwo Naukowe Akademii Pedagogicznej.
- Piotrowska, Maria. 2007. *Proces decyzyjny tłumacza: podstawy metodologii nauczania przekładu pisemnego*. Kraków: Wydawnictwo Naukowe Akademii Pedagogicznej.
- Pisarska, Alicja. 1989. *Creativity of translators*. Poznań: Adam Mickiewicz University.
- Pisarska, Alicja. 2004. "Metaphor and other tropes as translation problems: A linguistic perspective." In: Frank, Armin P. – Norbert Greiner – Theo Hermans – Harald Kittel – Werner Koller – José Lambert – Paul Fritz (eds.), 520-527.
- Płusa, Paweł. 2000. *Kształcenie tłumaczy*. Częstochowa: Wydawnictwo Wyższej Szkoły Pedagogicznej w Częstochowie.
- Płusa, Paweł. 2007. *Rozwijanie kompetencji przekładu i kształcenie tłumaczy*. Katowice: Wydawnictwo Uniwersytetu Śląskiego.
- Poincaré, Henri. 1913. *The foundations of science*. New York: Science Press.
- Pokorn, Nike. 2005. *Challenging the traditional axioms: translation into the non-mother tongue*. Amsterdam: John Benjamins.
- Pöchhacker, Franz – Miriam Shlesinger (eds.). 2002. *The Interpreting Studies reader*. London: Routledge.

- Potter, Mary C. – Kwok-Fai So – Barbara Von Eckardt – Laurie B. Feldman. 1984. "Lexical and conceptual representation in beginning and more proficient bilinguals." *Journal of Verbal Learning and Verbal Behavior* 23: 23-38.
- Poulisse, Nanda – Theo Bongaerts. 1994. "First language use in second language production". *Applied Linguistics* 15: 36-57.
- Prat, Chantel S. – Timothy Keller – Marcel A. Just. 2007. "Individual differences in sentence comprehension: A functional magnetic resonance imaging investigation of syntactic and lexical processing demands". *Journal of Cognitive Neuroscience* 19,12: 1950-1963.
- Presas, Marisa. 2000. "Bilingual competence and translation competence." In: Schäffner, Christine – Beverly Adab (eds.), 19-31.
- Preston, Malcolm S. – Wallace E. Lambert. 1969. "Interlingual interference in a bilingual version of the Stroop color-word task". *Journal of Verbal Learning and Verbal Behavior* 8: 295-301.
- Price, Cathy J. – David Green – Roswitha von Studnitz. 1999. "A functional imaging study of translation and language switching". *Brain* 122,12: 2221-2235.
- Prior, Anat – Brian MacWhinney. 2010. "A bilingual advantage in task switching". *Bilingualism: Language and Cognition* 13: 253-262.
- Pym, Anthony. 1993. *Epistemological problems in translation and its teaching*. Calaceite: Caminade.
- Pym, Anthony. 1998. "Okay, so how are translation norms negotiated? A question for Gideon Toury and Theo Hermans". *Current Issues in Language and Society* 5,1-2: 107-113.
- Pym, Anthony. 2003. "Redefining translation competence in an electronic age. In defence of a minimalist approach". *META* 48: 481-497.
- Rapoport, Anatol. 1961. *Fights, games and debates*. Michigan: Michigan University Press.
- Rapp, Brenda (ed.). 2001. *The handbook of cognitive neuropsychology*. New York: Psychology Press.
- Rayner, Keith. 1998. "Eye movements in reading and information processing: 20 years of research". *Psychological Bulletin* 124: 372-422.
- Reiss, Katharina. 1981. "Type, kind and individuality of text. Decision making in translation". *Poetics Today* 2,4: 121-131.
- Reiss, Katharina – Hans, J. Vermeer. 1984. *Grundlegung einer allgemeinen Translationstheorie*. Tübingen: Niemeyer.
- Rihimäki, Mikko. 2005. "Game theory in translation: memetics as a recourse". ([www.uta.fi/mikko.rihimaki](http://www.uta.fi/mikko.rihimaki)) (date of access 12 June 2009).
- Risku, Hanna. 1998. *Translatorische Kompetenz. Kognitive Grundlegen des Übersetzens als Expertentätigkeit*. Tübingen: Stauffenburg.
- Risku, Hanna. 2002. "Situativeness in Translation Studies". *Cognitive Systems Research* 3: 523-533.
- Ritchie, William – Tej Bhatia (eds.). 1996. *A handbook of Second Language Acquisition*. New York: Academic Press.

- Robinson, Douglas. 1997. *Becoming a translator*. London: Routledge.
- Roberts, Roda P. 1992. "Translation pedagogy: strategies for improving dictionary use". *TTR: Traduction, Terminologie, Rédaction* 5,1: 49-76.
- Roberts, Roda P. 1997. "Using dictionaries efficiently". Paper presented at 38th Annual Conference of the American Translators Association, San Francisco, California. (<http://www.dico.uottawa.ca/articles-en.htm>) (date of access: 20 September 2010).
- Rodriguez-Fornells, Antoni – Ruth De Diego Balaguer – Thomas F. Münte. 2006. "Executive control in bilingual language processing". *Language Learning* 56: 133-190.
- Roehr, Karen. 2008. "Metalinguistic knowledge and language-analytic ability in university-level L2 learners". *Applied Linguistics* 29: 173-199.
- Rose, Marilyn G. (ed.). 1987. *Translation excellence: assessment, achievement, maintenance*. New York: SUNY Binghamton Press.
- Rose, Marilyn G. 1991. "Seeking synapses: Translators describe translating." In: Larson, Midred (ed.), 5-12.
- Rosi-Landi, Ferruccio. 1973. *Ideologies of linguistic relativity*. The Hague: Mouton.
- Roussey, Jean-Yves – Annie Piolat – F. Guercin. 1990. "Revising strategies for different text types". *Language and Education* 4,1: 51-65.
- Ruiz, Carmen – Natalia Paredes – Pedro Macizo – Maria T. Bajo. 2008. "Activation of lexical and syntactic target language properties in translation. *Acta Psychologica* 128: 490-500.
- Rumjahn, Hossain, – Salili Farideh (eds.). 2005. *Language in multicultural education*. Connecticut: Information Age Publishing Inc.
- Rysiewicz, Jacek. 2008. "Measuring foreign language learning aptitude. Polish adaptation of The Modern Language Aptitude Test by Carroll and Sapon". *Poznań Studies in Contemporary Linguistics* 44,4: 569-595.
- Saarinen, Esa – Raimo P. Hämäläinen. 2007. "Systems intelligence: Connecting engineering thinking with human sensitivity". In: Hämäläinen, Raimo P. – Esa Saarinen (eds.), 51-77.
- Salas, Eduardo – Michael A. Rosen – Deborah Diaz Granados. 2010. "Expertise-based intuition and decision making in organizations". *Journal of Management* 36,4: 941-973.
- Samuelsson-Brown, Geoffrey. 2010. *A practical guide for translators* [fifth revised edition]. Clevedon: Multilingual Matters.
- Schäffner, Christina. 1998. "Parallel texts in translation". In: Bowker, Lynne – Michael Cronin – Dorothy Kenny – Jennifer Pearson (eds.), 83-90.
- Schäffner, Christine (ed.). 2002. *The role of discourse analysis for translation and in translator training*. Clevedon: Multilingual Matters.
- Schäffner, Christine – Beverly Adab (eds.). 2000. *Developing translation competence*. Amsterdam: John Benjamins.
- Schank, Roger. 1986. *Explanation patterns: Understanding mechanically and creatively*. Hillsdale, NJ: Lawrence Erlbaum Associates.



- Schilperoord, Joost. 1996. *It's about time: Temporal aspects of cognitive processes in text production*. Amsterdam: Rodopi.
- Schmidt, Morena A. 2005. *How do you do it anyway? A longitudinal study of three translator students translating from Russian into Swedish*. Doctoral dissertation. Stockholm: Acta Universitatis Stockholmiensis.
- Schmitt, Peter – Susann Herold – Anette Weilandt (eds.). 2011. *Translationsforschung: Tagungsberichte der LICTRA IX*. Frankfurt am Main: Peter Lang.
- Schneider, Johann – Marianne Schneider-Düker (eds.). 1977. *Interpretationen der Wirklichkeit*. Saarbrücken: Schriften.
- Schön, Donald. 1983. *The reflective practitioner: How professionals think in action*. London: Temple Smith.
- Schottländer, Rudolf. 1972. "Paradoxien der Kreativität". *Zeitschrift für philosophische Forschung* XXVI,2: 153-170.
- Schreuder, Robert – Bert Weltens (eds.). 1993. *The bilingual lexicon*. Amsterdam: John Benjamins.
- Schulte, Rainer – John Biguenat (eds.). 1992. *Theories of translation*. Chicago: University of Chicago Press.
- Schumann, John H. 1998. *The neurobiology of affect in language*. Oxford: Blackwell.
- Schweda-Nicholson, Nancy. 2005. "Personality characteristics of interpreter trainees: the Myers-Briggs Type Indicator (MBTI)". *The Interpreters' Newsletter* 13: 109-142.
- Segalowitz, Norman S. – Sidney J. Segalowitz. 1993. "Skilled performance, practice, and the differentiation of speed-up from automatization effects; evidence from second language word recognition". *Applied Psycholinguistics* 14: 369-385.
- Segalowitz, Sidney J. – Norman S. Segalowitz – Anthony G. Wood. 1998. "Assessing the development of automaticity in second language word recognition". *Applied Psycholinguistics* 19: 53-67.
- Segalowitz, Norman S. – Jan Hulstijn. 2005. "Automaticity in bilingualism and second language learning". In: Kroll, Judith – Annette M.B. De Groot (eds.), 371-388.
- Séguinot, Candance (ed.). 1989a. *The translation process*. Toronto: H.G. Publications.
- Séguinot, Candance. 1989b. "Understanding why translators make mistakes". *TTR: Traduction, Terminologie, Rédaction* 2,2: 73-81.
- Séguinot, Candance. 1997. "Accounting for variability in translation". In: Danks, Joseph H. – Gregory M. Shreve – Stephen B. Fountain – Michael K. McBeath (eds.), 104-119.
- Séguinot, Candance. 2000. "Management issues in the translation process". In: Tirkkonen-Condit, Sonia – Ritta Jääskeläinen (eds.), 143-148.
- Seleskovitch, Danica. 1976. "Interpretation: a psychological approach to translating". In: Brislin Richard W. (ed.), 92-116.
- Seleskovitch, Danica. 1978. "Language and cognition". In: Gerver, David – Wallace H. Sinaiko (eds.), 333-341.
- Selinker, Larry. 1972. "Interlanguage". *International Review of Applied Linguistics* 10,3: 209-231.

- Senge, Peter. 1990. *The fifth discipline: The art and practice of the learning organization*. New York: Doubleday Currency
- Senge, Peter. 1999. *The dance of change: The challenges of sustaining momentum in learning organizations*. London: Brealey.
- Sercu, Lies. 2004. "Researching the acquisition of intercultural communicative competence in a foreign language: Setting the agenda for a research area". In: Esch, Kees van – John, Oliver St. (eds.), 131-156.
- Sewell, Penelope. 1996. "Translation in the curriculum". In: Sewell, Penelope – Ian Higgins (eds), 135-159.
- Sewell, Penelope. 2004. "Students buzz round the translation class like bees round the honey pot – why?". In: Malmkjaer, Kirsten (ed.), 151-162.
- Sewell, Penelope – Ian Higgins (eds). 1996. *Teaching translation in universities. Present and future perspective*. London: CILIT.
- Sfard, Anna. 1998. "On two metaphors for learning and the danger of choosing just one". *Educational Researcher* 27,2: 4-13.
- Shannon, Sheila M. 1987. *English in the Barrio: a sociolinguistic study of second language contact*. Unpublished doctoral dissertation. Stanford University.
- Shannon, Sheila M. 1990. "English in the Barrio: The quality of contact among immigrant children". *Hispanic Journal of Behavioral Sciences* 12: 256-276.
- Shlesinger, Miriam. 2000. *Strategic allocation of working memory and other attentional resources in simultaneous interpreting*. Unpublished doctoral dissertation. Bar Ilan.
- Shreve, Gregory M. 1997. "Cognition and the evolution of translation competence". In: Danks, Joseph H. – Gregory M. Shreve – Stephen B. Fountain – Michael K. McBeath (eds.), 120-136.
- Shreve, Gregory M. – Geoffrey S. Koby. 1997. "Introduction". In: Danks, Joseph E. – Gregory M. Shreve – Stephen B. Fountain – Michael K. McBeath (eds.). xi-xviii.
- Shreve, Gregory M. – Erik Angelone (eds.). 2010. *Translation and cognition*. Amsterdam: John Benjamins.
- Sinclair, Anne – Robert J. Jarvella – Willem J. M. Levelt (eds.). 1978. *The child's conception of language*. Berlin: Springer Verlag.
- Sirén, Seija – Kai Hakkarainen. 2002. "Expertise in translation". *Across Languages and Cultures* 3.1: 71-82.
- Snell-Hornby, Mary. 1988. *Translation Studies: An integrated approach*. Amsterdam: John Benjamins.
- Snell-Hornby, Mary. 1992. "The professional translator of tomorrow: language specialist or all-around expert?" In: Dollerup Cay – Anne Loddegaard (eds.), 9-22.
- Snell-Hornby, Mary. 2002. "Back to square one? – on the troubled relationship between Translation Studies and linguistics". *Logos and Language* 3,1: 21-30.
- Snell-Hornby, Mary. 2006. *The turns of Translation Studies*. Amsterdam: John Benjamins.

- Snell-Hornby, Mary – Doina Motas – Jennifer Williams. 1992. "New translation departments – challenges of the future". In: Snell-Hornby, Mary – Franz Pöchhacker – Klaus Kaindl (eds.), 431-434.
- Snell-Hornby, Mary – Franz Pöchhacker – Klaus Kaindl (eds.). 1992. *Translation Studies: An interdiscipline*. Amsterdam: John Benjamins.
- Sofer, Morry. 1997/2006. *The translator's handbook*. Rockville: Schreiber Publishing.
- Sommer, Doris (ed.). 2003. *Bilingual games. Some literary investigations*. New York: Palgrave Macmillan.
- Sperber, Dan – Deidre Wilson. 1986. *Relevance: communication and cognition*. Oxford: Blackwell.
- Squire, Larry – Eric R. Kandel. 2009. *Memory: From mind to molecules*. Greenwood: Roberts & Company.
- Stansfield, Charles W. – Mary L. Scott – Dorry M. Kenyon. 1992. "The measurement of translation ability". *The Modern Language Journal* 76,4: 455-467.
- Steinberg, Robert J. (ed.). 1984. *Mechanisms of cognitive development*. San Francisco: Freeman.
- Stibbard, Richard. 1998. "The principled use of oral translation in foreign language teaching". In: Malmkjær, Kirsten (ed.), 69-76.
- Sternberg, Robert. 1998. "Abilities are forms of developing expertise". *Educational Researcher* 27,3: 11-20.
- Sullivan, Kirk P.H. – Eva L. Lindgren (eds.). 2006. *Computer keystroke logging and writing: methods and applications*. Oxford: Elsevier.
- Stolze, Radegundis. 2004. "Creating "presence" in translation". In: Hansen Gyde – Kirsten Malmkjær – Daniel Gile (eds.), 39-71.
- Stroop, John R. 1935. "Studies of interference in serial verbal reactions". *Journal of Experimental Psychology* 18: 643-662.
- Superczyński, Tomasz. 2009. *Translators as critical readers of their translations. A study of revising strategies*. Unpublished BA thesis. Poznań. Adam Mickiewicz University.
- Swain, Merrill – Guy Dumas – Neil Naiman. 1974. "Alternatives to spontaneous speech: elicited translation and imitation as indicators of second language competence". *Working Papers on Bilingualism* 3: 68-79.
- Swain, Merrill – Sharon Lapkin. 2000. "Task-based second language learning: the uses of the first language". *Language Teaching Research* 4,3: 251-274.
- Tabakowska, Elżbieta. 2001. *Językoznawstwo kognitywne a poetyka przekładu*. Kraków: Universitas.
- Tabakowska, Elżbieta. 2003. *O przekładzie na przykładzie*. Kraków: Znak.
- Taylor, Chris. 1990. *The error analysis of translation and its application to language teaching*. Trieste: SSLMIT, University of Trieste.
- Tennent, Martha (ed.). 2005. *Training for the new millennium*. Amsterdam: John Benjamins.
- Thelen, Marcel – Barbara Lewandowska-Tomaszczyk (eds.). 1990. *Translation and Meaning, Part I*. Maastricht: Euroterm.

- Thiery, Christopher. 1978. "True bilingualism *and* second language learning". In: Gerver, David – Wallace H. Sinaiko (eds.), 145-153.
- Thierry, Guillaume – Yan J. Wu. 2007. "Brain potentials reveal unconscious translation during foreign-language comprehension". *PNAS* 30,104: 12530-12535.
- Tirkkonen-Condit, Sonja. 1990. "Professional vs. non-professional translation: a think aloud protocol study". In: Halliday, Michael A.K. – John Gibbons – Howard Nicholas (eds.), 381-394.
- Tirkkonen-Condit, Sonja (ed.). 1991. *Empirical research in translation and intercultural studies: Selected papers of the TRANSIF seminar, Savonlinna 1988*. Tübingen: Narr.
- Tirkkonen-Condit, Sonja – John. Laffling (eds.). 1993. *Recent trends in empirical translation research*. Joensuu: University of Joensuu.
- Tirkkonen-Condit, Sonja – Ritta Jääskeläinen (eds.). 2000. *Tapping and mapping the translation process*. Amsterdam: John Benjamins.
- Tokowicz, Natasha – Erika B. Michael – Judith F. Kroll. 2004. "The roles of study abroad experience and working memory capacity in the types of errors made during translation". *Bilingualism: Language and Cognition* 7: 255-272.
- Tomasello, Michael (ed.). 1998. *The new psychology of language*. London: Lawrence Erlbaum Associates.
- Toury, Gideon. 1984. "The notion of 'native translator' and translation teaching". In: Wilss, Wolfram – Gisela Thome (eds.), 186-195.
- Toury, Gideon. 1986. "Monitoring discourse transfer: A test case for developmental model of translation". In: House, Juliane – Shoshana Blum-Kulka (eds.), 79-94.
- Toury, Gideon. 1995. *Descriptive Translation Studies and beyond*. Amsterdam: John Benjamins.
- Tunmer, William E. – Marion E. Myhill. 1984. "Metalinguistic awareness and bilingualism". In: Tunmer, William E. – Chantel Prat – Michael L. Herriman (eds.), 169-187.
- Tunmer, William E. – Chantel Prat – Michael L. Herriman (eds.). 1984. *Metalinguistic awareness in children*. Berlin: Springer.
- Tymczyńska, Maria. 2011. *Lexical processing in online translation tasks. The case of Polish-English-German professional and trainee conference interpreters*. Unpublished doctoral dissertation. Poznań. Adam Mickiewicz University.
- Tymoczko, Maria. 2005. "Trajectories of research in Translation Studies". *META* 50,4: 1082-1097.
- Tymoczko, Maria. 2007. *Enlarging translation, empowering translators*. Manchester: St Jerome.
- Tymoczko, Maria – Edwin Gentzler (ed.). 2007. *Translation and power*. Amherst: University of Massachusetts Press.
- Uwajeh, M.K.C. 1994. "Teaching linguists translation". In: Dollerup, Cay – Annette Lindegaard (eds.), 287-294.
- Varantola, Krista. 1998. "Translators and their use of dictionaries: User needs and user habits". In: Atkins, Sue (ed.), 179-192.

- Venuti, Lawrence. 1995. *The translator's invisibility: a history of translation*. New York: Routledge.
- Venuti, Lawrence (ed.). 2000. *The Translation Studies reader*. London: Routledge.
- Verhoeven, Ludo – John de Jong (eds.). 1992. *The construct of language proficiency*. Amsterdam: John Benjamins.
- Vermeer, Anne. 1992. "Exploring the second learner language lexicon". In: Verhoeven, Ludo - John de Jong (eds.), 147-162.
- Vermes, Albert. 2010. "Translation in foreign language teaching: a brief overview of pros and cons". *Eger Journal of English Studies* X: 83-93.
- Vienne, Jean. 1998. "Teaching what they didn't learn as language students". In: Malmkjaer, Kirsten (ed.), 111-116.
- Volkovitch, Michel. 1998. "Une idée neuve en Europe". In Fortunato, Israel (ed.), 235-244.
- Waddington, Christopher. 2000. *Estudio comparativo de diferentes métodos de evaluación de traducción general (inglés-español)*. Madrid: Publicaciones de la Universidad Pontificia Comillas.
- Walters, Joel. 2005. *Bilingualism: The sociopragmatic – psycholinguistic interface*. London: Lawrence Erlbaum Associates.
- Waterhouse, Lynn. 2006. "Multiple intelligences, the Mozart effect and emotional intelligence: a critical review". *Educational Psychologist* 41,4: 207-225.
- Wei, Li (ed.). 2000. *The bilingualism reader*. London: Routledge.
- Weinreich, Uriel. 1953. *Languages in contact: Findings and problems*. The Hague: Mouton.
- Whorf, Benjamin. 1956. *Language, thought, reality*. New York: Wiley.
- Whyatt, Bogusława. 2000. *A psycholinguistic investigation into the processes of comprehension and production: a decision making approach towards the preservation of meaning in translation*. Unpublished doctoral dissertation. Poznań. Adam Mickiewicz University.
- Whyatt, Bogusława. 2003. "Reading for translation: investigating the process of foreign language text comprehension from an information processing perspective". *Studia Anglica Posnaniensia*, 39: 133-147.
- Whyatt, Bogusława. 2006a. "Psycholingwistyczne spojrzenie na użycie słowników w procesie tłumaczenia tekstu z języka obcego (angielskiego) na język rodzimy (polski)". *Neofilolog* 28: 70-77.
- Whyatt, Bogusława. 2006b. "Discovering the bilingual mind – some evidence for the reorganization of the mental lexicon in translation students". In: Dziubalska-Kołodziej, Katarzyna (ed.), 729-747.
- Whyatt, Bogusława. 2006c. "The essence of translation, Fillmore's frames and scenes and the communicative quality of Polish-English menu translations". In: Fisiak, Jacek (ed.), 101-111.
- Whyatt, Bogusława. 2007a. "Meaning as a dynamic concept. A Think Aloud Protocol study into strategies performed by inexperienced translators" In: Fabiszak, Małgorzata (ed.), 329-341.

- Whyatt, Bogusława. 2007b. "Two Languages, two cultures, one mind: a study into developmental changes in the students' view of language as a tool in cross-cultural communication". *Poznań Studies in Contemporary Linguistics* 43,2: 133-145.
- Whyatt, Bogusława. 2008. "Bilingual knowledge and interlingual skills: A discussion of the benefits of translation tasks for second language learners". In: Pawlak, Mirosław (ed.), 197-210.
- Whyatt, Bogusława. 2009a. "Building L2 communicative confidence through interlingual tasks; towards function-focused L2 learning". In: Dynel, Marta (ed.), 365-388.
- Whyatt, Bogusława. 2009b. "Translating as a way of improving language control in the mind of an L2 learner: assets, requirements and challenges of translation tasks". In: Witte, Arnd – Theo Harden – Alessandra Ramos de Oliveira Harden (eds.), 181-202.
- Whyatt, Bogusława. 2009c. "The interlingual individual". Paper presented at the 7<sup>th</sup> Symposium on Bilingualism. Utrecht.
- Whyatt, Bogusława. 2010. "Bilingual language control in translation tasks. A TAP study into mental effort management by inexperienced translators". In: Arabski, Janusz – Adam Wojtaszek (eds.), 79-92.
- Whyatt, Bogusława. 2011. "Review of: *A Career in Language Translation by Férailleur-Dumoulin's. The Interpreter and Translator Trainer* 5,2: 366-371.
- Wierzbicka, Anna. 1991. *Cross-cultural pragmatics: the semantics of human interaction*. Oxford: Oxford University Press.
- Wilss, Wolfram. 1976. "Perspectives and limitations of a didactic framework for the teaching of translation". In: Brislin, Richard W. (ed.), 117-137.
- Wilss, Wolfram. 1982. *The science of translation. Problems and methods*. Tübingen: Gunter Narr.
- Wilss, Wolfram. 1988. *Kognition und Übersetzen*. Tübingen: Niemeyer.
- Wilss, Wolfram. 1996. *Knowledge and skills in translator behaviour*. Amsterdam: John Benjamins.
- Wilss, Wolfram. 1997. "Translator awareness". *Revista Ilha do Desterro* 33: 89-100.
- Wilss, Wolfram. 1999. *Translation and interpreting in the 20th century. Focus on German*. Amsterdam: John Benjamins.
- Wilss, Wolfram – Gisela Thome (eds.). 1984. *Die Theorie des Übersetzens und ihr Aufschlusswert für die Übersetzungs- und Dolmetschdidaktik*. Tübingen: Narr.
- Witczak-Plisiecka, Iwona (ed.). 2010. *Pragmatic perspectives on language and linguistics; Vol.1: Speech actions in theory and applied studies*. Newcastle: Cambridge Scholars Publishing.
- Witte, Arnd. 2009. "From translating to translation in foreign language learning". In: Witte, Arnd – Theo Harden – Alessandra Ramos de Oliveira Harden (eds.), 79-97.
- Witte, Arnd – Theo Harden – Alessandra Ramos de Oliveira Harden (eds.). 2009. *Translation in second language learning and teaching*. Oxford: Peter Lang.

- Wright, Richard D. – Lawrence M. Ward. 2008. *Orienting of attention*. New York: Oxford University Press.
- Zampolli, Antonio (ed.). 1977. *Linguistic structures processing*. Amsterdam: North-Holland.
- Zawada, Anna. 2009. *Modelling personality profile of a good translator. A questionnaire study of foreign language learners, translation trainees and professional translators*. Unpublished BA thesis. Poznań. Adam Mickiewicz University.
- Zojer, Heidi. 2009. “The methodological potential of translation in second language acquisition: Re-evaluating translation as a teaching tool”. In: Witte, Arnd – Theo Harden – Alessandra Ramos de Oliveira Harden (eds.), 31-51.





## Appendix I

### ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Duration of the translation task	Between Groups	287 892	2	143 946	0,368	0,696
	Within Groups	8 213 950	21	391 140		
	Total	8 501 843	23			
Time prior to the onset of translation	Between Groups	6 491	2	3 246	1,102	0,351
	Within Groups	61 856	21	2 946		
	Total	68 347	23			
Time for post-draft revision	Between Groups	82 054	2	41 027	0,589	0,564
	Within Groups	1 462 747	21	69 655		
	Total	1 544 801	23			
Production during post-revision	Between Groups	3 089	2	1 545	0,334	0,720
	Within Groups	97 119	21	4 625		
	Total	100 208	23			
Consulting external sources	Between Groups	2	2	1	0,045	0,956
	Within Groups	524	21	25		
	Total	527	23			
Text elimination	Between Groups	6 500	2	3 250	0,465	0,634
	Within Groups	146 632	21	6 982		
	Total	153 132	23			
Cursor and mouse movement	Between Groups	34 010	2	17 005	0,180	0,837
	Within Groups	1 988 712	21	94 701		
	Total	2 022 722	23			

Graph 17. Significant test – no differences between the groups

**Descriptive Statistics**

			N	Mean	Std. deviation	S.E. mean
Total User Events (TUE)	KIN/ NO	no KIN	24	1 701,21	449,910	91,837
	KIN	KIN	24	1 656,71	399,848	81,619
Text production (TP)	KIN/ NO	no KIN	24	1 281,33	95,982	19,592
	KIN	KIN	24	1 290,63	145,211	29,641
Text elimination (TE)	KIN/ NO	no KIN	24	145,54	92,483	18,878
	KIN	KIN	24	134,17	72,598	14,819
Cursor navigation (CN)	KIN/ NO	no KIN	24	211,83	394,614	80,550
	KIN	KIN	24	187,17	241,972	49,392
Mouse Event (ME)	KIN/ NO	no KIN	24	62,29	48,881	9,978
	KIN	KIN	24	44,46	32,011	6,534
Navigation in text (CN + ME)	KIN/ NO	no KIN	24	274,13	384,743	78,535
	KIN	KIN	24	231,63	243,320	49,667
Dictionary Use (DU)	KIN/ NO	no KIN	24	12,38	8,032	1,639
	KIN	KIN	24	13,13	5,841	1,192
Duration (Dur)	KIN/ NO	no KIN	24	32:17:23	12:02:32	02:27:29
	KIN	KIN	24	35:14:55	10:40:54	02:10:49
Events per minute (EPM)	KIN/ NO	no KIN	24	58,8888	22,52180	4,59724
	KIN	KIN	24	49,9367	14,42069	2,94361
Text Production per minute (TPM)	KIN/ NO	no KIN	24	44,6613	14,43733	2,94701
	KIN	KIN	24	39,2254	10,04288	2,04999

Graph 18. Descriptive statistics for both groups

**Significant correlations**

		Duration (Dur)	Text Production per minute (TPM)	Dictionary Use (DU)	Navigation in text (CN + ME)
Text Production per minute (TPM)	Pearson Correlation	-,929(**)			
	Sig. (2-tailed)	0,000			
	N	48			
Dictionary Use (DU)	Pearson Correlation	,581(**)	-,535(**)		
	Sig. (2-tailed)	0,000	0,000		
	N	48	48		
Navigation in text (CN + ME)	Pearson Correlation	0,021	-0,029	-0,075	
	Sig. (2-tailed)	0,888	0,847	0,614	
	N	48	48	48	
Text elimination (TE)	Pearson Correlation	0,189	-0,029	0,006	,371(**)
	Sig. (2-tailed)	0,199	0,845	0,970	0,009
	N	48	48	48	48

. \*\*. Correlation is significant at the 0.01 level (2-tailed).

Graph 19. Significant correlations between text production features.



## Appendix II

Study 1  
SL Text  
„Tatarak”

*Film oparty na opowiadaniu Jarosława Iwaszkiewicza, wydaje się być subtelną i wzruszającą historią o niemożliwej miłości. Jednak Andrzej Wajda idzie dalej, tworząc wielowymiarową opowieść o miłości, która przychodzi za późno i o śmierci, która zawsze przychodzi za wcześnie. Marta (Krystyna Janda) jest żoną doktora (Jan Englert) z małego miasteczka. Pewnego dnia Marta poznaje znacznie młodszego od siebie mężczyznę, prostego robotnika Bogusia (Paweł Szajda), który oczarowuje ją swoją młodością i niewinnością. Ich spotkania na brzegu rzeki porośniętej tatarakiem są naznaczone wzajemną fascynacją. Jedno z nich zmierza do przedwczesnego końca, drugie zaś wkracza dopiero w dojrzałość jednak los obchodzi się z nimi okrutnie...*

*Tatarak to również film o tworzeniu filmu, a główną bohaterką jest nie tylko fikcyjna Marta, ale i aktorka, która ją gra. Andrzej Wajda wplótł w opowiadanie Iwaszkiewicza autentyczne monologi Krystyny Jandy na temat przedwczesnej śmierci jej męża, cenionego operatora Edwarda Kłosińskiego. W ten sposób obie kobiety – Krystyna i Marta – zlewają się w jedną głęboko zranioną istotę, która musi znaleźć w sobie siłę i poradzić sobie z perspektywą nieuniknionej śmierci.*

Source: Advertising leaflet available in Polish cinemas

Randomly chosen samples of translations with their Translog files and statistics





touh ching and [33.234] a  
 [17.193] her [22.003]  
 she [29.152] with [20.035]  
 , B M v [33.699] M M  
 [Stop]

Subject: S7	G1
Total user events	1853
Text production	1457
Text elimination	220
Cursor navigation	93
Mouse events	83
Dictionary consultations	5 bilingual, 5 monolingual
Internet look ups	
Duration	36:57.039
User events per minute	50.15
Text production per minute	39.43

S8 G2

“Sweet flag”

The film, based upon Jarosław Iwaszkiewicz’s short story, seems to be nothing more than an impossible moving love story. However, Andrzej Wajda, the director, moves further in order to create a multidimensional story about a late-in-life love and a premature death. Marta (Krystyna Janda) is the wife of a small town doctor (Jan Englert). One day Marta meets Boguś, a simple worker who is far younger than her. She is charmed by his innocence and youth. They meet on a river bank covered with sweet flag where their mutual fascination grows. One of them is approaching a premature end, the other is stepping into maturity but a cruel fate awaits them...

The Sweet flag also tells a story of film-making in which the main hero is not only a fictitious character called Marta but also the actress who acts her role. Andrzej Wajda interweaves Krystyna Janda’s true monologues on the premature death of her husband, a renowned cameraman Edward









innocence. Their meeting at the bank of a river grown with sweet flag is mutually fascinating. One of them is on the road to a premature end, the other is just entering maturity. But their future together is very painful...

“Sweet Flag” is also a film about film making. The main heroine is featured in two roles - that of Marta and that of an actress, whom she plays. Andrzej Wajda used Krystyna Janda’s genuine words about the premature death of her husband, Edward Kłosiński, a much appreciated film operator, and made them part of his film. In this way both women, Krystyna and Marta, bond into one deeply hurt being, which must find strength in itself and cope with the prospect of unavoidable death.

[Start] \*\*\*\* [^] [\*15.627]I[\*47.668]"\*\*\*Sweet♦Flat⊠g"⊘  
 ⊘\*\*\*The♦film♦\*⊠⊠⊠⊠⊠⊠⊠is♦is♦a♦screening♦of♦a♦novel♦  
 by⊠⊠⊠⊠⊠⊠⊠⊠short♦novel♦by♦Jarosław♦Iwaszkiewicz\*.\*  
 \*\*↔→→→→[Ctrl⊠][Ctrl⊠]\*↔s⊠⊠⊠seems♦to♦be♦a♦subtl  
 e♦and♦yet♦moving♦\*history[Ctrl⊠]story♦of♦an♦impossible♦lov  
 e.\*But♦Andrzej♦Wajda,♦the♦director,♦goes♦⊠[Ctrl⊠]takes♦  
 a♦step♦forward\* [Ctrl⊠][Ctrl⊠][Ctrl⊠][Ctrl⊠]\*had♦decide  
 d♦to♦\*make♦it♦a♦multi-faceted♦story♦about♦love,♦which♦comes  
 ♦too♦late♦a⊠⊠,♦and♦about♦death\*,♦which♦comes♦t⊠premature  
 ly.♦Marta♦(Kr⊠⊠starring♦Krystyna♦Janda)\*♦is♦the♦wife♦of♦  
 a♦doctor♦\* (starring♦Jan♦Englert)♦from♦a♦small♦town.♦One♦day  
 ♦Marta♦meets♦a♦much♦younger♦man\*,♦a♦simple♦worker♦\*Buguś♦(  
 sta⊠⊠⊠Paeł⊠⊠we♦S⊠⊠ł♦Szajda\_⊠),♦who♦enchants♦\*\*\*her♦  
 with♦his♦\*\*\*youth♦\*and♦innocence.♦\*Their♦meei⊠ting⊠at♦the  
 ♦\*bank♦of♦a♦river♦grown♦with♦se⊠week♦flag\*♦is♦mutually♦fa  
 cinating.♦One♦of♦them♦[\*13.236]is♦on♦the♦road♦\*to♦pre⊠⊠  
 ⊠a♦premature♦end,♦the♦other♦\*ju⊠⊠is♦just♦entering♦t⊠ma  
 turity\*\*.\*But\*\*\*\*their♦\*\*\*future♦together♦is♦ver  
 y♦painful...\*⊘⊘\*\*\*T⊠"Sweet♦Flat"♦⊠⊠⊠g"♦is♦also♦a♦fil  
 m♦about♦film♦making.♦The♦main♦heroine\*\*\*\*p⊠\*is♦featur  
 ed♦in♦two♦roles♦--Marta[Ctrl⊠]that♦of♦Marta♦and♦that♦of♦an♦  
 actree⊠ss,♦whom♦she♦st\*⊠⊠po⊠lays.♦Andrzej♦Wajda\*\*\*\*in  
 corporated♦\*a⊠genuine♦\*\*\*dia\*\*logu[Ctrl⊠]\*words\*\*\*\*[Ct  
 rl←][Ctrl←]Krystyna♦Janda'♦↔\*w⊠about\*\*\*\*[Ctrl←][Ctr  
 l←][Ctrl←][Ctrl←][Ctrl←][Ctrl←][Ctrl←]\*[Ctrl⊠]\*\*\*i⊠us

ed♦\*⇒\*\*the♦premautre♦death♦of♦her♦husband,♦Edward♦Kłosińs  
 ki,♦a♦\*much♦appreciated♦\*film♦operator\*\*\*,♦and♦made♦them♦  
 part♦of♦his♦film.♦In♦this♦way♦both♦women,♦Krysyt☒☒tyna♦an  
 d♦Marta,♦bond♦into♦one♦deeply♦hurt♦being\*,♦which♦must♦find♦  
 \*\*strength\*\*\*in♦itself♦and♦cope♦with♦the♦prospect♦of♦\*i  
 ☒\*\*\*\*uh☒navoidable♦death.\*\*\*\*\*[Stop]

Subject: S1	G3
Total user events	1413
Text production	1325
Text elimination	68
Cursor navigation	18
Mouse events	2
Dictionary consultations	0
Internet look ups	1
Duration	07:49.390
User events per minute	180.62
Text production per minute	169.37



## Appendix III

Study 2

SL text

„Legenda Zorro”

*W kontynuacji „Maski Zorro”, barwnego przeboju sprzed dziewięciu lat, Alejandro de la Vega (Banderas) wiezie poukładane życie statecznego obywatela, męża pięknej Eleny (Zeta-Jones) i ojca 10-letniego Joaquina (Alonso). Gdy jednak zachodzi potrzeba, przystojny szlachcic zakłada czarną maskę, płaszcz, wsiada na konia i pędzi ratować świat. Ten zresztą potrzebuje go nieustannie, co mocno irytuje donnę de la Vega. Przez dziesięć lat znosiła niecodzienne hobby małżonka, teraz mówi "basta!" i każe bohaterowi wybierać między zabawą w obrońcę uciśnionych a rodziną. Na tym kłopotów Zorro nie koniec, bo oto tajne stowarzyszenie Rycerzy Aragonii chce zapobiec przyłączeniu Kalifornii do USA, a z zagranicznych wojaży wraca jego dawny wróg hrabia Armand (Sewell), który ostrzy sobie zęby na Elenę. Efektowne galopady, machanie szabelkami i fruwanie na linach zachwycą małych chłopców, a uroda Zeta-Jones tych większych.*

Source: TV magazine

Randomly chosen samples of translations with their Translog files and statistics

S16 KIN group

The legend of Zorro

In a sequel of “The Mask of Zorro”, a colorfull hit from the previous nine years, Alejandro de la Vega (Banseras) leads a well-composed life of a sedate citizen, husband of a beautiful Elena (Zeta-Jones) and a father of a 10-year-old Joaquin (Alonso). When the need occurs, the handsome nobleman puts on a black mask, cloak, mounts the horse and hurries to





\*\*\*\*t the [ \*22.920] Aragon \*\*\*\* Knights \*\*\*\* wants  
to prevent \*\*\* [ \*23.730] prevent the e i  
ncorporation [ \*14.218] [ ^ ] [ \*10.984] [ ^ ]  
] of California rto [ \*15.373] count \*\*\* Armand ( \*Sewell) \* comes back from the [ \*  
54.910] overseas \*\*\* voyages [ ^ ], his \*\*\* old -time  
\*\*\* enemy, [ ^ ] \*\*\* who [ \*30.362] whet s his appetit  
e for el [ \*17.738] Spectat [ \*20.781] gallopades [ \*55.649] brandishing sab  
ers  
\*\*\* and [ \*36.205] flying \*\*\* on robes [ \*23.197] will fa  
scinate little boys, and \* the beu [ \* ] charm of Zeta-  
Jones \* will [ \* ] will do thge d [ \* ] same [ \* ] e [ \* ] e  
same for the big ones. \*\*\*\* [Stop]

Subject: S16	KIN group
Total user events	1349
Text production	1189
Text elimination	97
Cursor navigation	15
Mouse events	48
Dictionary consultations	5 bilingual
Internet look ups	0
Duration	33:02.941
User events per minute	40.82
Text production per minute	35.98

S12 NO KIN group

The Legend of Zorro,

In the continuation of “The Mask of Zorro”, a colourful blockbuster from before nine years, Alejandro de la Vega (Banderas) leads a peaceful life of a sedate citizen, a husband of beautiful Elena (Zeta-Jones) and a father of a 10-years old Joaquin (Alonso). But whenever there is a need, the handsome nobleman puts the black mask and his cloak on, mounts his horse and dashes to save the world. The latter needs him all the time in any case, which immensely irritates donna de la Vega. She has been







# Przekład jako umiejętność człowieka

## Od predyspozycji do poziomu eksperta

### (Streszczenie)

Książka podejmuje złożoną tematykę przekładu jako umiejętności człowieka. Z jednej strony panuje powszechne przekonanie, że tłumaczenie z jednego języka na drugi nie wymaga szczególnych umiejętności poza znajomością dwóch języków. Z drugiej strony często słyszy się opinie, że tłumaczenia powszechnie dostępne są słabej jakości. Najwyraźniej mamy do czynienia z całym spektrum czynników, które determinują ludzką umiejętność dokonywania tłumaczeń z jednego języka na drugi. Aby uwzględnić czynniki wpływające na to jak dana osoba wykonuje tłumaczenie autorka przedstawia tłumaczenie jako umiejętność, która obejmuje ewolucję od danej człowiekowi predyspozycji do interpretacji znaczenia i przenoszenia odczytanego sensu w inne formy językowe (lub pozajęzykowe) do kompetencji przypisywanych ekspertom w sztuce przekładu. Dokonując wnikliwej analizy obecnego stanu wiedzy autorka wysuwa hipotezę, iż rozwój umiejętności dokonywania przekładu do poziomu eksperta opiera się na odpowiedniej integracji wiedzy językowej i konceptualnej. Tłumacz, aby przenieść sens z tekstu w języku źródłowym na tekst w języku docelowym uczy się budować Sieć Integracji Wiedzy (Knowledge Integration Network) koniecznej do wykonania danego tłumaczenia.

Książka składa się z dwóch zasadniczych części. Rozdziały 1-5 to teoretyczne rozważania nad ewolucją i rozwojem umiejętności dokonywania przekładu. Rozdział 6 i 7 to empiryczna część relacjonująca przeprowadzone przez autorkę badania nad rozwojem umiejętności dokonywania przekładu z uwzględnieniem hipotezy Sieci Integracji Wiedzy.

Rozdział pierwszy wprowadza czytelnika w tematykę przekładu jako umiejętności. Autorka wychodzi z założenia, że tłumaczenie jest czynnością powszechną dla użytkowników nawet tylko jednego języka. Komunikacja, to przecież ciągle wyrażanie sensu w różnych kodach. Użycie języka, to odpowiednie zakodowanie treści w formę, która jest

odczytywana i interpretowana i ukazuje ową treść odbiorcy przekazu. W pewnym sensie zatem wszyscy jesteśmy tłumaczami. Powszechne jest przekonanie, że każdy, kto zna dwa języki potrafi również tłumaczyć. Nie każdy natomiast będzie w stanie wykonać nawet dość proste tłumaczenie pisemne nie popełniając często zasadniczych błędów językowych bądź też znaczeniowych. Tak jak w przypadku wielu złożonych umiejętności, umiejętność tłumaczenia nie rozwinię się samoistnie nawet jeżeli nasza kompetencja językowa w dwóch językach jest dobra. Słusznym zatem wydaje się przeanalizowanie ewolucyjnego spektrum, które prowadzi od predyspozycji do poziomu kompetencji eksperta w sztuce przekładu.

Rozdział drugi analizuje znajomość dwóch języków jako podstawę, na której można zbudować kompetencje tłumacza. Autorka stawia podstawowe pytania: Co to znaczy znać drugi język? Jak ludzki umysł rozróżnia pomiędzy językami? Jak wygląda struktura pamięci, w której muszą pomieścić się różne słowa (w języku pierwszym i drugim) na określenie tego samego pojęcia? Co dzieje się w sytuacji kiedy nie tylko słowa, ale i pojęcia są różne, albo tylko trochę podobne? Bazując na obecnym stanie wiedzy z zakresu psycholingwistyki, bilingwalizmu i psychologii kognitywnej coraz mniej jest wątpliwości, że dwa języki w jednym umyśle są w stanie ciągłej, dynamicznej interakcji. Użytkownik dwóch języków, a zwłaszcza tłumacz musi wypracować odpowiednie mechanizmy kontroli, aby nie mylić form lub treści przypisanych swoim dwóm językom. Taki obraz skomplikowanej i dynamicznej wiedzy językowej niezwykle rzadko jest uwzględniany przez naukę o przekładzie jako źródło problemów czysto tłumaczeniowych.

Rozdział trzeci i czwarty zajmuje się dwoma istotnymi etapami w rozwoju umiejętności tłumaczenia. W rozdziale trzecim analizie poddano tłumaczenie jako umiejętność naturalną, a zatem to jak tłumaczą osoby znające dwa języki, ale nie posiadające żadnego przygotowania lub wykształcenia jako tłumacze. Autorka podkreśla, że analiza takich tłumaczeń jest ważna dla zrozumienia ewolucyjnej ciągłości wpisanej w rozwój kompetencji przyszłych tłumaczy zawodowych. Bazując na skąpych badaniach w tym zakresie, naturalni tłumacze, zarówno osoby wychowane (tzw. 'natural bilinguals') i funkcjonujące w dwóch językach (np. imigranci) lub uczące się języków obcych są w stanie tłumaczyć, ale ich tłumaczenia są problematyczne pod względem formy lub/i treści. Aby zatem umiejętność tłumaczenia mogła się rozwinąć do poziomu

oczekiwanego od zawodowych tłumaczy niezbędne jest nabycie szeregu kompetencji, które pozwolą na uniknięcie błędów językowych i tłumaczeniowych. Rozdział czwarty omawia obecny stan wiedzy dotyczący zakresu kompetencji tłumacza, zagadnienia z zakresu pedagogiki przekładu i analizę zawodu tłumacza.

Rozdział piąty przedstawia propozycję autorki dotyczącą rozwoju kompetencji tłumaczy zawodowych postrzeganej jako proces integracji wiedzy. Hipoteza, iż doskonalenie umiejętności dokonywania przekładu jest świadomym i celowym rozwojem umiejętności budowania tzw. Sieci Integracji Wiedzy (*Knowledge Integration Network*) oparta jest na założeniach przyjętych w naukach kognitywnych i psycholingwistyce przekładu, i szczegółowo wyjaśniona w odniesieniu do podobieństw i różnic pomiędzy niedoświadczonymi i doświadczonymi tłumaczami. W takim ujęciu tłumacz, to uczący się ekspert, który wykorzystuje swoje doświadczenie i autorefleksję, aby rozwijać pewność siebie konieczną do rozwiązywania nowych problemów w trakcie dokonywania przekładu.

Hipoteza Sieci Integracji Wiedzy zostaje poddana weryfikacji poprzez badania empiryczne. W rozdziale szóstym, autorka analizuje ankiety wypełnione przez potencjalnych i praktykujących tłumaczy, a w rozdziale siódmym analizie poddaje proces tłumaczenia tekstu przez tłumaczy znajdujących się na różnych etapach rozwoju kompetencji, od początkujących (studenci Filologii Angielskiej) do tłumaczy z 30-letnim doświadczeniem. Metoda badawcza, to program komputerowy *Translog*, (Jakobsen and Schou 1999) który pozwala na wgląd w proces tłumaczenia zapisując wszystkie czynności wykonane na klawiaturze podczas tłumaczenia tekstu.

Wnioski z przeprowadzonej analizy potwierdzają ewolucyjny charakter rozwoju kompetencji tłumaczeniowych jako procesu integracji wiedzy językowej i konceptualnej. Implikacje, które wyłaniają się z przeprowadzonej rozprawy dotyczą pedagogiki przekładu, wykorzystania czynności tłumaczenia w procesie nauczania języka obcego i przyszłych badań nad tłumaczeniem jako umiejętnością człowieka, która angażuje całkowity potencjał intelektualny.