

**Do Adult Simultaneous Bilinguals  
Outperform Adult Sequential Bilinguals  
in Simulated Experimental Bi-  
Directional Simultaneous Interpreting  
Tasks?**

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**A thesis submitted in partial fulfilment of the requirements for  
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College**



# Declaration

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October 2018



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**I dedicate this thesis to my mother, Heather Moore, with love.**





# Summary

This thesis sets out to explore the possibility of an intra-bilingual advantage for adult simultaneous bilinguals in simulated experimental bi-directional simultaneous interpreting (SI) tasks. Research in Interpreting Studies skirts this issue, having as its principal aims improved interpreter training or interdisciplinary theoretical analysis and modelling of the SI activity itself. Bilingualism Studies, however, offers decades of work in the areas of Second Language Acquisition (SLA) and cognition on bilingual advantage, that is, a bilingual advantage over monolinguals. Research in bilingualism has focused on bilingual children, dating from early pedagogical concerns regarding best classroom practices for integrating immigrant students into the educational system. The study of bilingualism relied heavily on comparisons with bilinguals' monolingual counterparts, and therefore bilinguals in monolingual mode, and has established convincing arguments in cognitive terms for the existence of the bilingual advantage. Increasingly, attention has turned to interdisciplinary research on young adults, adults who have migrated by choice and adults with brain injuries and ageing issues but, again, largely in monolingual mode or in terms of regaining lost language skills or building cognitive reserves for the future.

There is a notable paucity of work, therefore, which this thesis aims to address, on non-immigrant adult bilinguals of working age, without medical conditions and not in comparison with monolinguals. A further gap exists in the direct comparison of simultaneous and sequential bilinguals with reference to a task as comprehensive as bi-directional SI. Some recent studies have begun to compare early and late bilinguals in other linguistic and cognitive settings, pointing to other factors such as usage and balance which impinge on bilingual profiles but, as yet, no research appears to have attempted a direct comparison in SI. There is increasing interest in the issue of language directionality in interpreting but, once again, no work contrasts simultaneous and sequential bilinguals.

Chapter 1 documents the rationale for this research and how research in both interpreting and bilingualism combine to form the theoretical basis on which it

is posited. Chapter 2 reviews the relevant literature, elucidating the role of age of acquisition (AoA), the defining factor in this study, and the functional relationship between the bilingual's two languages, which lies at the heart of any investigation of how they use their languages to perform SI. It highlights the crucial importance of the individual profile of the bilingual due largely to acquisition by domain, as proposed by Grosjean. It reviews research on language storage, access and retrieval, takes into consideration Grosjean's insistence that understanding language mode is indispensable in any research on bilinguals and uses his Interpreting Model to clarify bilingual mode in the SI activity. Chapter 3 portrays the complexities of the SI activity, isolating its components – comprehension, processing and production - as distilled principally from the work of two leading researchers, Seleskovich and Gile, and also with reference to practical training manuals. The directionality debate is outlined and placed in the context of ongoing controversy. Chapter 4 identifies the three data collection instruments employed in the mixed-methods approach: the experimental SI task, the Think-Aloud Protocols (TAP) related to the task and the questionnaire. It details design procedures, the piloting phase and the data collection and preparation procedures and their implementation. Chapter 5 identifies the research population, presents the descriptive and inferential statistical analyses of the overall and individual bi-directional SI task scores and compares participant perceived dominance with pre- and post-task predictions on directionality with their actual scores. Chapter 6 discusses the qualitative findings of the research project. Two key themes emerged from the Think-Aloud Protocols: The Bilingual Self, with its sub-themes of bilingual identity and dominance, and the participants' perspective on directionality; and Language Storage, Access and Retrieval, along with the roles of ageing and attrition. Chapter 7 responds to the research questions, synthesising the findings of both data sets reported in Chapters 5 and 6. It shows that more unites the simultaneous and sequential bilinguals than divides them and lists the set of factors found by both groups to impact on their language profile and therefore influence their SI performance. Chapter 8 evaluates the project's findings and explores their relevance within a discussion of theoretical framework employed. It notes the contributions and limitations of the research and makes some suggestions regarding possible future directions of related work.



# Table of Contents

|   |       |
|---|-------|
| Declaration .....   | iii   |
| Acknowledgements .....  | v     |
| Tables and Figures .....  | xvii  |
| List of Tables .....  | xvii  |
| List of Figures .....   | xxi   |
| List of Abbreviations .....   | xxiii |
| Chapter 1: Introduction .....   | 2     |
| 1.1 Rationale .....   | 2     |
| 1.2 Research Background .....   | 2     |
| 1.3 Thesis Overview .....   | 6     |
| Chapter 2: Literature Review .....                                      | 10    |
| 2.1 Introduction .....  | 10    |
| 2.2 Investigating Bilingualism .....                                    | 10    |
| 2.3 Grosjean's Work on Language Use and Bilingual Individuality .....   | 12    |
| 2.4 Age of Acquisition and a Critical Period .....                      | 14    |
| 2.5 Balance/Dominance and Individuality .....                           | 18    |
| 2.6 Dominance and Proficiency .....                                     | 19    |
| 2.7 The Bilingual Child and The Bilingual Advantage .....               | 22    |
| 2.8 Language Storage, Access and Retrieval .....                        | 28    |
| 2.9 Grosjean and the Bilingual Language Mode .....                      | 39    |
| 2.10 Conclusion .....   | 43    |
| Chapter 3: Simultaneous Interpreting .....                              | 45    |
| 3.1 Introduction .....  | 45    |
| 3.2 Interpreting Definitions .....                                      | 45    |
| 3.3 Interpreting Modes and Language Combinations .....                  | 47    |
| 3.4 Bilinguals and Translation/Interpreting .....                       | 48    |
| 3.5 Interpretive Theory (IT) and Cognitive Processing Theory (CP) ..... | 50    |
| 3.6 Directionality .....  | 56    |
| 3.7 SI Models .....   | 59    |
| 3.8 Conclusion .....  | 61    |
| Chapter 4: Research Methodology .....                                   | 64    |
| 4.1 Introduction .....  | 64    |
| 4.2 Research Questions .....  | 64    |
| 4.3 Research Design and Data Collection Instruments .....               | 66    |

|   |     |
|---|-----|
| 4.3.1 Bilingual Language Background Questionnaire.....              | 68  |
| 4.3.2 Adapting the Simultaneous Interpreting Task.....              | 71  |
| 4.4 Assessment of the SI Tasks.....                                 | 75  |
| 4.4.1 Ranking Criteria for the SI Task.....                         | 77  |
| 4.4.2 Raters.....   | 78  |
| 4.5 SI Task Data Preparation.....                                   | 79  |
| 4.6 Piloting.....   | 80  |
| 4.7 Think-Aloud Protocols.....                                      | 82  |
| 4.7.1 Think-Aloud Protocols Data Preparation.....                   | 83  |
| 4.8 Administering the Adapted SI Task.....                          | 85  |
| 4.9 Think-Aloud Protocol Data Analysis.....                         | 86  |
| 4.9.1 First-Cycle Coding.....                                       | 87  |
| 4.9.2 Second Cycle of Coding in Nvivo.....                          | 89  |
| 4.10 Conclusion.....  | 89  |
| Chapter 5: Quantitative Results.....                                | 91  |
| 5.1 Introduction.....   | 91  |
| 5.2 Research Population.....  | 91  |
| 5.2.1 Recruitment and Sampling.....                                 | 93  |
| 5.3 Questionnaire Data on Participant Backgrounds.....              | 93  |
| 5.3.1 Gender.....   | 93  |
| 5.3.2 Age.....  | 94  |
| 5.3.3 Place of Birth.....   | 94  |
| 5.3.4 Occupations.....  | 94  |
| 5.3.5. Education Levels.....  | 95  |
| 5.3.6 Order of Acquisition of Languages Spoken by Participants..... | 96  |
| 5.3.6.1 Languages Spoken to and by Participants in Childhood.....   | 96  |
| 5.3.7 Historic Language Use.....                                    | 100 |
| 5.3.8 Historic Languages of Instruction.....                        | 104 |
| 5.3.9 Proficiency.....  | 105 |
| 5.3.10 Daily Language Use.....                                      | 106 |
| 5.4 SI Task Scores: Descriptive Statistics.....                     | 110 |
| 5.4.1 Overall Participant Rankings.....                             | 110 |
| 5.4.2 SI Task into English.....                                     | 112 |
| 5.4.3 SI Task into FRESIT (French/Spanish/Italian).....             | 114 |
| 5.5 SI Task Scores: Inferential Statistics.....                     | 116 |

|   |     |
|---|-----|
| 5.5.1 Scores by Task .....  | 117 |
| 5.5.2 Performance in the Categories of the SI Task .....                                | 119 |
| 5.5.2.1 Interpreting from FRESIT into English .....                                     | 119 |
| 5.5.2.2 Interpreting from English into FRESIT .....                                     | 122 |
| 5.5.3 Summary of Quantitative Findings .....  | 126 |
| 5.6 Comparing Perceptions of Dominance and Directionality with SI Task<br>Results ..... | 127 |
| 5.6.1 Participants' Predictions .....   | 127 |
| 5.6.1.1 Participant Perceived Dominance .....   | 134 |
| 5.6.1.2 Pre-and Post-Task Predictions Compared with Scores .....                        | 136 |
| 5.6.2 Comparing Predictions and Performance .....                                       | 137 |
| 5.7 Conclusion.....   | 139 |
| Chapter 6: Qualitative Findings .....   | 142 |
| 6.1 Introduction .....  | 142 |
| 6.2. Themes Emerging from Nvivo Coding .....  | 142 |
| 6.3 Key Theme 1: The Bilingual Self.....  | 144 |
| 6.3.1 Sub-Theme 1: Degree of Bilingualism .....   | 144 |
| 6.3.2 Sub-Theme 2: Language Dominance .....   | 148 |
| 6.3.3 Sub-Theme 3: Directionality .....   | 157 |
| 6.3.3.1 Preference for B-to-A Interpreting .....  | 159 |
| 6.3.3.2 Preference for A-to-B Interpreting .....  | 164 |
| 6.3.4 Conclusion to Key Theme 1: The Bilingual Self.....                                | 170 |
| 6.4 Key Theme 2: Language Storage, Access and Retrieval .....                           | 170 |
| 6.4.1 Languages Stored Separately.....  | 171 |
| 6.4.2 Languages Stored Separately with Crossover .....                                  | 174 |
| 6.4.3 Languages Stored in the Same Place .....  | 175 |
| 6.4.4 'Thereness' .....   | 178 |
| 6.4.5 Languages Stored According to Experience, Domain or Interlocutor<br>.....         | 179 |
| 6.4.6 Other Factors Perceived to Affect SI Performance: Ageing and<br>Attrition.....    | 181 |
| 6.4.7 Comparing Raw Scores with Current Age of Participants. ....                       | 186 |
| 6.4.8 Conclusion to Key-Theme 2 .....   | 190 |
| 6.5 Conclusion.....   | 190 |
| Chapter 7: Discussion .....   | 193 |

|  |     |
|--|-----|
| 7.1 Introduction .....   | 193 |
| 7.2 Research Question 1: Do adult simultaneous bilinguals outperform adult sequential bilinguals in simulated experimental bi-directional simultaneous interpreting tasks? .....                 | 193 |
| 7.3 Research Question 2: In which categories do adult simultaneous bilinguals outperform adult sequential bilinguals (or vice versa)? .....  | 195 |
| 7.4 Participant predictions regarding bi-directional tasks compared with their actual scores .....   | 197 |
| 7.5 Research Question 3: Are there any differences in perceptions between the simultaneous and sequential bilinguals in terms of language storage, linguistic dominance and directionality?..... | 198 |
| 7.6 Comparing the performance and perceptions of simultaneous and sequential bilinguals .....  | 200 |
| 7.7 Conclusion.....  | 203 |
| Chapter 8: Conclusion.....   | 205 |
| 8.1. Introduction .....  | 205 |
| 8.2 Research Framework.....  | 205 |
| 8.3 Contributions of this Study .....  | 210 |
| 8.4 Limitations .....  | 211 |
| 8.5 Conclusion.....  | 211 |
| References.....  | 214 |
| Appendices.....  | 230 |
| Appendix 1: Bilingual Language Questionnaire .....   | 230 |
| Appendix 2: Adapted Version of Schjoldager's (1996) Rubric for Assessing the SI Tasks .....  | 244 |
| Appendix 3: Ethics Approval.....   | 247 |
| Appendix 4: Transcriptions of Think-Aloud Protocols and SI Tasks (Participants 1-48) .....   | 249 |





# Tables and Figures

## List of Tables

|   |     |
|---|-----|
| Table 1: Research questions and corresponding research instruments and data analysis tools .....  | 68  |
| Table 2: Overview of SI task topics.....  | 75  |
| Table 3: Breakdown by gender (N=48) .....   | 94  |
| Table 4: Participant age range.....   | 94  |
| Table 5: Level of education .....   | 96  |
| Table 6: Languages spoken by and to participants' siblings during childhood (N=48).....   | 97  |
| Table 7: Languages spoken by and to participants' grandparents during childhood.....  | 98  |
| Table 8: Languages spoken by and to participants' caregiver during childhood .....  | 99  |
| Table 9: Languages spoken by and to participants' parents during childhood .....  | 100 |
| Table 10: Total number of months/years spent in a country where English or FRESIT are spoken .....  | 102 |
| Table 11: Total number of months/years spent in a family where English or FRESIT are spoken .....   | 103 |
| Table 12: Total number of months/years spent in education and/or working environment where English or FRESIT are spoken .....                                       | 104 |
| Table 13: Main language of instruction in primary and secondary school.....   | 104 |
| Table 14: English and FRESIT as a foreign/second language at primary school .....   | 105 |
| Table 15: English and FRESIT as a foreign/second language at secondary school .....   | 105 |
| Table 16: Rating of English and FRESIT proficiency (1 = Native-speaker or native-speaker-like proficiency, 7 = Very limited proficiency) .....                      | 106 |
| Table 17: Daily use of English and FRESIT with family and friends .....   | 107 |
| Table 18: Frequency of English or FRESIT as language to listen to music/podcasts/radio.....   | 107 |
| Table 19: Likelihood of browsing the internet in English and FRESIT .....   | 108 |
| Table 20: Language usage at work .....  | 109 |
| Table 21: Raw scores percentage bands for average of both tasks.....  | 111 |
| Table 22: Average scores by bilingual type and task (%) .....   | 112 |
| Table 23: Raw scores percentage bands for task into English.....  | 114 |
| Table 24: Raw scores percentage bands for task into FRESIT.....   | 116 |
| Table 25: Mean and standard deviations of overall average score on both simultaneous interpreting tasks (by bilingual type).....                                    | 117 |
| Table 26: Mean and standard deviations of average score of both simultaneous interpreting tasks, score into English and score into FRESIT (by bilingual type) ..... | 118 |

|  |     |
|--|-----|
| Table 27: Means, standard deviations and parametric test results (two samples independent t-tests) which examined the differences between the two bilingual groups (from FRESIT into English)..... | 120 |
| Table 28: Means, standard deviations and non-parametric test results (Mann-Whitney U) which examined the differences between the two bilingual groups (from FRESIT into English) .....             | 122 |
| Table 29: Means, standard deviations and parametric test results (two samples independent t-tests) that examined the differences between the two bilingual groups (from English into FRESIT).....  | 124 |
| Table 30: Means, standard deviations and non-parametric test results (Mann-Whitney U) that examined the differences between the two bilingual groups (from English into FRESIT) .....              | 126 |
| Table 31: Perceived dominance and participant predictions for the French simultaneous bilingual group .....  | 129 |
| Table 32: Perceived dominance and participant predictions for the Spanish simultaneous bilingual group .....   | 130 |
| Table 33: Perceived dominance and participant predictions for the Italian simultaneous bilingual group .....   | 131 |
| Table 34: Perceived dominance and participant predictions for the French sequential bilingual group .....  | 132 |
| Table 35: Perceived dominance and participant predictions for the Spanish sequential bilingual group .....   | 133 |
| Table 36: Perceived dominance and participant predictions for the Italian sequential bilingual group .....   | 134 |
| Table 37: Pre-task predictions on directionality by non-balanced bilingual group (n=45) .....  | 136 |
| Table 38: Post-task predictions on directionality by non-balanced bilingual group (n=45) .....   | 136 |
| Table 39: Correct and incorrect pre-task predictions in the non-balanced group (n=42).....   | 137 |
| Table 40: Correct post-task predictions in the non-balanced group (n=42) ...   | 138 |
| Table 41: Incorrect post-task predictions in the non-balanced group (n=39) .   | 138 |
| Table 42: Themes emerging from first cycle of coding.....  | 143 |
| Table 43: Key themes and sub-themes in this research project .....   | 144 |
| Table 44: Bilingual language ability and perfectionism .....   | 145 |
| Table 45: Sense of not being a true bilingual.....   | 146 |
| Table 46: Nuanced balance in the self-perceived balanced bilinguals .....  | 147 |
| Table 47: Current language usage: domain - home .....  | 149 |
| Table 48: Current language usage: interlocutor .....   | 150 |
| Table 49: Current language usage: home and/or work .....   | 151 |
| Table 50: Current language usage: home or schooling.....   | 151 |
| Table 51: Current language usage: greater accuracy in language of education .....  | 152 |
| Table 52: Language usage: different languages for different topics.....  | 153 |
| Table 53: Recency of language use.....   | 155 |
| Table 54: Language mode.....   | 156 |

|   |     |
|---|-----|
| Table 55: Balanced bilinguals and directionality.....   | 158 |
| Table 56: Differing linguistic skill sets.....  | 160 |
| Table 57: Current language use and fluency.....   | 162 |
| Table 58: Current linguistic versatility .....  | 164 |
| Table 59: Dominance and processing .....  | 166 |
| Table 60: Difficulties in both directions .....   | 168 |
| Table 61: Expressions describing language storage .....   | 171 |
| Table 62: Verbs describing language access .....  | 172 |
| Table 63: Languages located in a specific place.....  | 172 |
| Table 64: Different languages located in different places .....   | 173 |
| Table 65: Separate stores and current language use .....  | 174 |
| Table 66: Languages in different places with crossover.....   | 174 |
| Table 67: Facility in moving between languages .....  | 175 |
| Table 68: Languages stored in the same place.....   | 176 |
| Table 69: Languages stored in the same place and according to<br>location/language in use.....                              | 177 |
| Table 70: Speaking words in a language by accident or because they fit better<br>.....                                      | 177 |
| Table 71: Languages just ‘there’ .....  | 178 |
| Table 72: ‘Thereness’ retrieval .....   | 178 |
| Table 73: Languages stored principally according to experience, domain or<br>interlocutor.....                              | 180 |
| Table 74: Recent usage and retrieval .....  | 181 |
| Table 75: Ageing.....   | 182 |
| Table 76: Attrition: simultaneous bilinguals.....   | 185 |
| Table 77: Attrition: sequential bilinguals .....  | 186 |
| Table 78: Comparing overall order of participants ranked 1-24 by average (%)<br>in the two SI tasks with current age .....  | 187 |
| Table 79: Comparing overall order of participants ranked 25-48 by average (%)<br>in the two SI tasks with current age ..... | 188 |
| Table 80: Ranking of the three self-perceived balanced bilinguals .....   | 202 |



## List of Figures

|   |     |
|---|-----|
| Figure 1: Grosjean's (2008) Complementarity Principle Model .....   | 13  |
| Figure 2: Typology of language dominance based on language proficiency<br>(Treffers-Daller 2016). (The X-axis represents proficiency in language X; the<br>Y-axis represents proficiency in language Y.)..... | 21  |
| Figure 3: Revised Hierarchical Model, adapted from Kroll and Stewart (1994)<br>.....  | 33  |
| Figure 4: Grosjean's Language Mode Continuum (2008) .....   | 42  |
| Figure 5: Participant languages spoken .....  | 92  |
| Figure 6: Language spoken in simultaneous participants' place of birth (N=24)<br>.....  | 101 |
| Figure 7: Language spoken in sequential participants' place of birth (N=24)   | 101 |
| Figure 8: Ranking of participants according to overall score (%) in the two SI<br>tasks.....  | 110 |
| Figure 9: Ranking of participants according to score (%) into English.....  | 113 |
| Figure 10: Ranking of participants according to score (%) into FRESIT.....  | 115 |



## List of Abbreviations

|        |   |
|--------|---|
| AIIC   | International Association of Conference Interpreters  |
| AoA    | Age of Acquisition  |
| BFLA   | Bilingual First Language Acquisition  |
| BICS   | Basic Interpersonal Communicative Skills  |
| BLC    | Basic Language Cognition  |
| CADCAS | Computer Assisted Qualitative Data Analysis   |
| CALP   | Cognitive Academic Language Proficiency   |
| CP     | Cognitive Processing  |
| CP     | Critical Period   |
| CPM    | Complementarity Principle Model   |
| FRESIT | Acronym used to denote the languages other than English in this doctoral project: French, Spanish and Italian |
| HLC    | Higher Language Cognition   |
| IPA    | International Phonetic Alphabet   |
| IT     | Interpretive Theory   |
| L1     | First language  |
| L2     | Second language   |
| SES    | Socio-Economic Status   |
| SI     | Simultaneous Interpreting   |
| SLA    | Second Language Acquisition   |
| SPSS   | Statistical Package for the Social Sciences   |
| TAP    | Think-Aloud Protocol  |







# Chapter 1: Introduction

## 1.1 Rationale

This doctoral research came about due to my interest, as a practising interpreter, in investigating misconceptions held by members of the public, agencies employing interpreters and some bilinguals themselves regarding the nature of interpreting, particularly simultaneous interpreting (SI), and precisely who is capable of carrying out the job. There is a general assumption that being raised bilingual from birth, that is being a simultaneous bilingual, is synonymous with being a good interpreter, an assumption which I have not found to be well grounded in practice. I had initially intended to devise a simultaneous interpreting task to test this assumption which could be carried out in an interpreting booth, but, as will be explained in the Research Methodology chapter, access to professional facilities proved impossible. An adapted interpreting task was created, and, because I also had a specific interest in bi-directional interpreting, that is interpreting into and out of both of the interpreter's languages, the overall research question for this project was formulated as follows: Do adult simultaneous bilinguals outperform adult sequential bilinguals in simulated experimental bi-directional simultaneous interpreting tasks? Two further research questions were articulated. Research Question 2 refers to the performance-ranking categories within the simultaneous interpretation task designed for the project: In which categories do adult simultaneous bilinguals outperform adult sequential bilinguals (or vice versa)? Research Question 3 sought to compare the perceptions of the two participant groups: Are there any differences in perceptions between the simultaneous and sequential bilinguals in terms of language storage, linguistic dominance and directionality?

## 1.2 Research Background

In search of a theoretical framework within which to situate my research, I turned first to the field of Interpreting Studies. I found that it has concentrated its attention, on the one hand, on the practical issue of training of interpreters (e.g. Gillies 2013), their role and the professionalisation of their work worldwide

(Mikkelsen 1996; Turner 2007; Wadensjö, Dimitrova, and Nilsson 2007), and, on the other hand, on the relationship between Interpreting and its parent, Translation Studies (Baker 2011; Pöchhacker and Schlesinger 2002), on interdisciplinarity research between Linguistics and Psychology (e.g. Gile 2015), Sociology and Neuro-Imaging (e.g. Pym, Shlesinger, and Jettmarova 2006; Fabbro and Gran 1994), and on analysing and modelling the process involved in the different interpreting activities (Christoffels and De Groot 2005). Researchers in both these areas, the practical and theoretical, are agreed that the SI activity is composed of three main components: comprehension, processing and production.

It was evident that some of this research would be useful for this doctoral project but that it would first be fruitful to ground the work in the field of Bilingualism, particularly Second Language Acquisition (SLA) research and psycholinguistic research into cognitive processes (see Williams 1995). Research in adult bilingualism, however, is a relatively recent phenomenon and has evolved from original concerns regarding the bilingual education of children, largely as a result of immigration (e.g. Cummins 1981; Peal and Lambert 1962). One key approach in this area has been to compare bilingual children with their monolingual counterparts (Bialystok et al. 2004; Genesee 2009). Relatively recently, attention has turned to young adults (Seçer 2016), voluntary or involuntary migrant adults (Moyer and Rojo 2007; Opitz 2011), adults with brain injuries (Marrero, Golden, and Espe-Pfeifer 2002; Mendez et al. 1999) and ageing adults (Anderson, Saleemi, and Bialystok 2017). These adults have, again, overwhelmingly, been researched with reference to monolinguals. As a result, I found that there is a considerable gap in studies on healthy, non-immigrant adult bilinguals in what has come to be known as bilingual mode (Grosjean 2008) and not in comparison with monolinguals.

SLA research has now moved beyond considerations of second language acquisition to second language use and the interactive processing mechanisms involved in managing two language systems. Its focus has also expanded beyond basic and intermediate language learners to more advanced learners and highly proficient speakers (e.g. Hulstijn 2015), which includes the cohort from which the bilingual prepared to take on the complex cognitive challenge of SI must

come. In setting out to compare the performance of adult simultaneous and sequential bilinguals, it is age of acquisition of the bilingual's two languages which is set as the determining factor in quantifying findings. Those bilinguals who have acquired both their languages as young children are considered to be simultaneous bilinguals, whereas sequential bilinguals are defined as those who have learnt their languages in succession, some while their first language (L1) was also still being fully acquired (early sequentials) and some after their L1 has been firmly established (late sequentials) (Williams 1995). Simultaneous bilinguals are widely believed to be native speakers of both their languages, that is having two L1s, with highly proficient sequentials capable of reaching 'near-native' (*Ibid.*: 148) levels in their L2 but still distinctly possessing an L1 and an L2. From this perspective it is easy to appreciate the rise of the assumption that simultaneous bilinguals would therefore make better interpreters, having 'equal' command of both languages.

However, the literature (Grosjean 2010; McLaughlin 1978) shows first that this is an oversimplification, that a bilingual is not 'the sum of two complete or incomplete monolinguals' (Grosjean 2008: 13). Secondly, researchers such as Kroll, Bogulski and McClain (2012), for example, have shown that because the bilingual's two languages come to influence each other in different ways, their functionality differs from that of a monolingual speaker of either language. Examining the particular functionality of the bilingual's two languages has become the focus of scrutiny not only in linguistics but also in psycholinguistics and neurolinguistics, to name but two of the collaborative disciplines attracted into the debate, for example, the interconnection of verbal systems (Paivio and Desrochers 1980), switching mechanisms (Costa, Santesteban, and Ivanova 2006) and language representation and control (Abutalebi and Green 2007). Thirdly, the literature (e.g. Williams 1995) also shows that different mechanisms operate in L1s and L2s for perception and production, therefore affecting the central processing activity of SI.

SI, in fact, demands a performance which requires very specific management of the bilingual's two languages under time constraints and therefore under stress,

and, thus, answering the principal research question necessitates broader consideration of the cognitive processes at work in the mind of the bilingual who undertakes the task and especially the psycholinguistic processes underlying the joint functioning of the bilingual's two languages. Cognitive research in bilingualism has concerned itself with processing capacity and the relationship of the bilingual's two languages to each other within one single mind. This raises issues of language separation, particularly language activation and suppression, along with storage, access and retrieval mechanisms and shared or separate lexical or conceptual representation. This in turn raises the issue of how the bilingual switches between his two sets when choosing to, or having to, speak in one language or the other and whether or not this constant switching over time builds up cognitive advantages – or a bilingual benefit in cognitive terms – over the monolingual speaker. Most of the research in this area over many decades has again been conducted with bilingual children (e.g. Cummins 1979; Johnson and Newport 1989) and only relatively recently has research moved on to a similar bilingual advantage in adults (e.g. Bialystok, Craik, and Luk 2008a; Connolly 2017) Although there is now work comparing early and late bilinguals in terms of executive function (Connolly 2017; Kalia, Wilbourn, and Ghio 2014) attentional control (Kapa and Colombo 2013), and in modules of language such as accent (Amengual 2017), I am not aware of any research which has specifically aimed to find a possible *intra*-bilingual benefit between simultaneous and sequential bilinguals in simultaneous interpreting.

Bilinguals in their normal daily life choose how to express themselves in whichever language is appropriate to the communicative setting, depending on their particular circumstances. However, interpreters, who, by definition must first be bilingual, are constrained by the particular demands of SI to convey what is said by one speaker in one language to a listener who does not understand that first language and they are therefore not free to express themselves voluntarily in the way they normally do. Grosjean (1997) draws a helpful distinction between these two personae, the 'regular bilingual' and the 'interpreting bilingual' (*Ibid.*: 168), which will inform to a very great degree the approach taken in this research.

Since the parameters of the SI task include tests which are bi-directional, participants in this study had the opportunity to experience the challenge of

interpreting into their weaker language. Weaker languages are largely under-researched in adult bilingualism (Bernardini 2017) and interpreting into one's weaker language is debated (e.g. Gile 1995a), with the traditional position, the preference of interpreting into the dominant language, now being increasingly challenged (Gile 2005). SLA research demonstrates that 'not only production, but also perception and comprehension is weaker in L2' (Williams 1995: 150). Therefore, the inclusion in this research of the issue of directionality in SI, which hinges on the extent to which each of the components - comprehension, processing and production - may be impaired within a time constraint and in both directions, adds a further dimension to the investigation of an intra-bilingual advantage.

### **1.3 Thesis Overview**

The structure of this thesis is as follows. Chapter 2 reviews the existing research on bilingualism, age of acquisition and other factors – usage, balance, dominance and proficiency – which determine the individual profiles of both simultaneous and sequential bilinguals. It proposes that bilingual individuality may be a more compelling lens through which to gauge an intra-bilingual advantage than AoA and therefore takes as its theoretical framework Grosjean's holistic theory and his Complementarity Principle Model (CPM) (2008). The chapter reviews research on language storage, access and retrieval, including Grosjean's Interpreting Model (2008).

Chapter 3 presents what the SI process entails and reviews the different interpreting modes and interpreter language combinations before discussing bilinguals and translation/interpreting. It goes on to examine two of the main interpreting paradigms: the interpretive theory (IT) (Pöchhacker 2004: 68) and the cognitive processing theory (CP) (Pöchhacker 2004: 73). Particular emphasis is placed on the work of two key interpreter/researchers, Seleskovitch and Gile. The chapter then outlines the current debate on directionality, which contextualises the choice of the bi-directional SI task in this research project. Finally, the chapter summarises the attempts which have been made to model the complexities of SI and formulate the essential components of the SI task.

Chapter 4 presents the research methodology employed in this project, which is a mixed-methods approach with three data collection instruments: an experimental simultaneous interpretation task, Think-Aloud Protocols related to the task and a questionnaire. The first part of the chapter reviews the design of this mixed-methods approach and the piloting phase. The second part presents the data collection and data preparation procedures and their implementation.

Chapter 5 presents the quantitative data collected in this study. It begins with a description of the research population as provided by the Language Background Questionnaire. It then presents the participants' raw scores and their resulting rankings in the SI tasks. It discusses in turn the descriptive and inferential statistics used to analyse both the overall SI task scores and the individual scores in each of the evaluation categories. It then compares the participants' pre- and post-task predictions with actual participant scores into and out of their perceived dominant language.

Chapter 6 presents the qualitative data gathered in this project. It introduces the first key theme to emerge from the Think-Aloud Protocols: The Bilingual Self, which reflects the participants' experience of allowing their bilingualism to be tested by the SI task and any flaws in it to be exposed. It addresses participants' statements regarding not being a 'genuine' bilingual, awareness of lack of balance in their two languages and the role of current usage and country of residence in their bilingual profiles. Lastly, participants enlarge on the experience of bi-directional interpreting, which further exposes their dominance in one or other of their two languages. The chapter then addresses the second key theme to emerge from the Think-Aloud Protocols: Language Storage, Access and Retrieval. Participants formulated how they, as inexperienced, untrained bilinguals, responded to a first attempt at bi-directional SI; what they found easier or more difficult than anticipated and why they thought this was the case. Language storage is discussed, along with the factors perceived to affect SI performance in general and language retrieval in particular.

Chapter 7 brings together the quantitative and qualitative findings of this doctoral research. Through responding to the research questions, it pays particular attention to the similarities (rather than the differences) which have emerged between the groups of simultaneous and sequential bilinguals. It

highlights the importance expressed by both groups of their personal and unique individual language profile which they felt impacted directly on their SI performance. The final section lists the recurring group of factors influencing this bilingual profile.

Chapter 8 returns to the rationale and objectives of the study and retraces the theoretical and methodological approaches employed in the project. It relates the findings to the current debates in the literature. Finally, it examines the ways in which these findings may contribute to our understanding of simultaneous and sequential bilinguals engaged in bi-directional SI tasks, noting the limitations of this project and suggesting further areas of research.





# Chapter 2: Literature Review

## 2.1 Introduction

This chapter sets out the theoretical framework of this doctoral research. The first section addresses the issue of definitions of bilingualism and discusses age of acquisition (AoA) in Second Language Acquisition (SLA). It highlights the importance of individual bilingual profiles and considers whether this individuality may be a more important factor in gauging advantage than AoA. Next, further factors such as usage, balance, dominance and proficiency which have a bearing on the individual bilingual profile are addressed. The following section deals with issues of language storage, access and retrieval. The last section returns to Grosjean and his work on language mode, central to the testing of bilinguals, and to his Interpreting Model which specifically envisages the mode of the simultaneous interpreter in action.

## 2.2 Investigating Bilingualism

The study of bilingualism is a wide-ranging and cross-disciplinary field that has been approached from diverse perspectives (Skutnabb-Kangas 1981) including ontology (Baetens Beardsmore 1986; Baker 2011; Bloomfield 1933; Holquist 2003), cognition (Bialystok, Craik, and Luk 2008b; Green and Abutalebi 2013; Hernández et al. 2010; Kroll and Bialystok 2013; Pelham and Abrams 2014; Vega-Mendoza et al. 2015), demography (Grosjean 1982; Kandler 2009; Termote 2003), identity (Baker 2011; Shin 2017), neurolinguistics (Fabbro 2013; Fabbro, Naatanen, and Kujala 1999; Paradis 1987, 1994, 2004; Alladi et al. 2015; Gold et al. 2013) and language acquisition (Abrahamsson and Hyltenstam 2008; Baker and Sienkewicz 2000; Birdsong 2005; DeKeyser, Alfi-Shabtay, and Ravid 2010; DeKeyser 2000b; Paradis 1994; Singleton and Ryan 2004). Early research in bilingualism (Cummins 1981; Darcy 1953; Lambert and Tucker 1972; Lenneberg 1967; Peal and Lambert 1962; Penfield and Roberts 1959) was orientated towards the children of immigrants who from birth spoke one language at home and another in the wider community into which they had migrated. Thus, in early descriptions, the term bilingual implied simultaneous bilingual, usually in one elite language and one heritage language with lesser social standing. The world however has changed dramatically and migration by

choice, globalisation and improved linguistic educational opportunities have afforded greater opportunity for a rise in sequential bilingualism and facilitated the emergence of well-educated elite bilinguals, both simultaneous and sequential, capable of using and maintaining both languages at an advanced level and not necessarily having to choose between them in daily life. However, the contexts in which the bilingual's two languages are acquired have not changed since the first empirical studies: in the home, through schooling, from exposure to the languages used in the community or in the street; and from having to or choosing to learn a second language informally or formally at a later stage in life. It may also be possible now to add online acquisition of a second language (Tudini 2010).

No single definition of bilingualism has been universally agreed upon. Beardsmore (1986: 1) notes 'bilingualism as a concept has open-ended semantics'. Ng reminds us that bilingualism is a complex phenomenon and 'is not as simple as it appears' (Ng 2015). At the simplest level the bilingual is 'a speaker of two languages' (De Angelis 2007: 5) but with over half of the world's population using two or more languages (Grosjean 2010), it is unrealistic to expect all bilinguals to fit into a single definition. It is more helpful in practice to shift the emphasis from the abstract concept of bilingualism to its manifestation in individual bilinguals, each as different from the next as each human being:

Whatever the circumstance, the way in which bilingualism develops, the amount of input from either of two languages, the motivation, the implications for one's cultural identity and sense of self, indeed the entire experience of, route to, and outcome of bilingualism will be as unique to each individual bilingual as their own fingerprint. (Connolly 2017: 2)

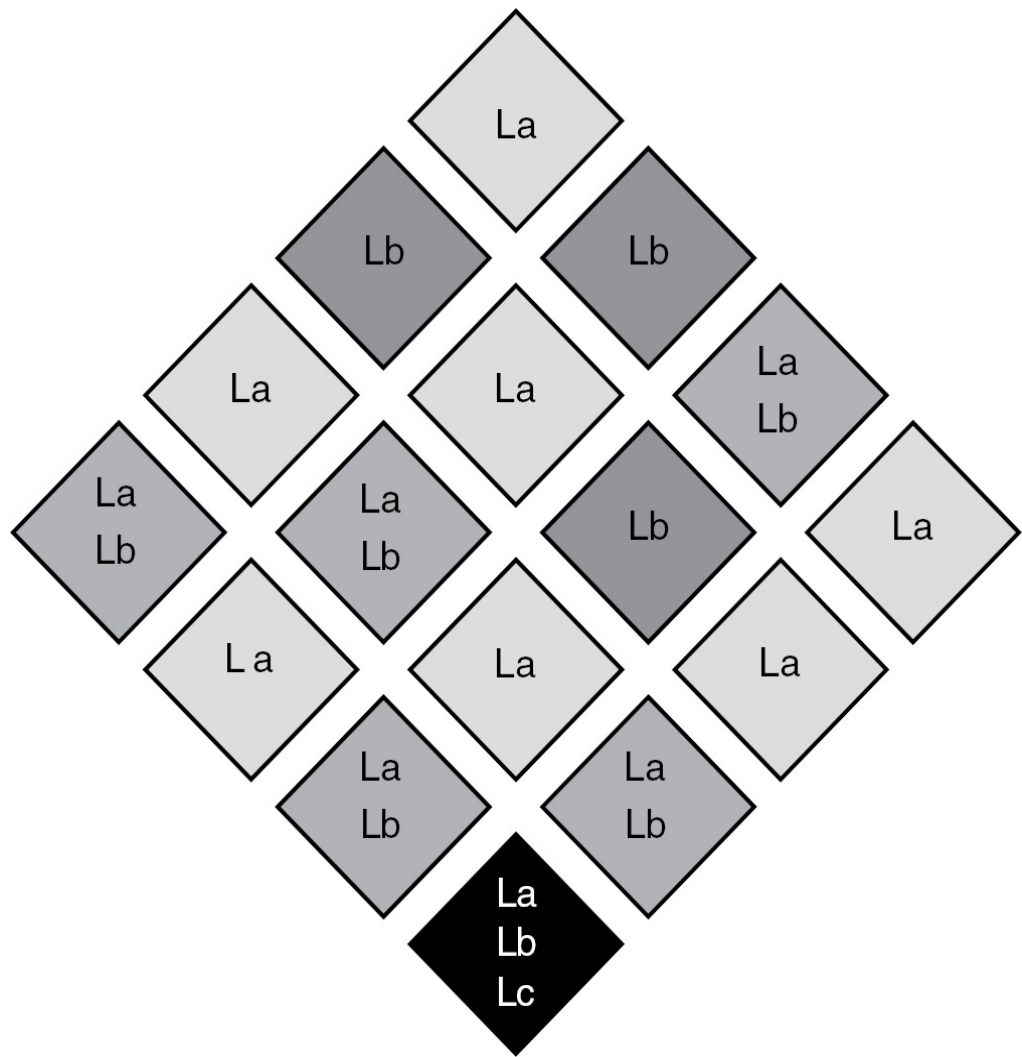
Baker (2011) stresses that the bilingual develops a unique competence in line with their needs and as a result of the differing contexts in which their two languages are used and views each bilingual as self-defining, 'a complete linguistic entity, an integrated whole' (*Ibid.*: 12) with 'a unique linguistic profile' (*Ibid.*: 9).

Below, I explore how the uniqueness of the individual profile of each bilingual relates to a possible advantage in simultaneous interpreting, turning first to Grosjean's Complementarity Principle Model and its implications for this project.

### **2.3 Grosjean's Work on Language Use and Bilingual Individuality**

Grosjean (2008: 23) points out that '[b]ilinguals usually acquire and use their languages for different purposes, in different domains of life, with different people. Different aspects of life often require different languages' and he (2010) identifies this language use as the determining factor of bilingual individuality. He (2008: 22-26) outlines in his Complementarity Principle Model (Figure 1 below) how different domains can determine an individual's proficiency levels in each language and how linguistic necessity will determine a bilingual's level of fluency, suggesting why bilinguals are rarely proficient in all domains in both languages. He posits a hypothetical bilingual profiled according to 16 possible domains of life – e.g. home, work, friends, media – represented by 16 hexagonal figures which do not interlock. A similar configuration could be drawn up for all bilinguals.

The bilingual in the figure below speaks languages a, b and c. Language a (La) is used in seven domains, Lb is used in three, La and Lb are used in five and there is only one domain in which all three languages (La, Lb and Lc) are used. One language pertains to certain domains, while other languages cross several domains.



*Figure 1: Grosjean's (2008) Complementarity Principle Model*

Thus, for Grosjean, use and context will differ with each individual bilingual, producing a specific, complex, unique biographical profile different from every other bilingual. In an earlier article (Grosjean 1997), he had stressed that this configuration of the bilingual's total language repertoire helps to account for why bilinguals rarely develop equal and total fluency in both their languages and are therefore not necessarily good interpreters: semantic equivalents may not be known (*Ibid.*); 'stylistic varieties' (*Ibid.*: 167) may be lacking; some bilinguals may not be bi-cultural and therefore not have the 'cultural knowledge (pragmatic competence) to understand an utterance in one of their languages' (*Ibid.*); most bilinguals 'will not have developed the necessary transfer skills' nor 'the specific on-line processing and memory mechanisms needed for [...] interpretation' (*Ibid.*: 168). Grosjean concludes:

Taking into account the complementarity principle is a crucial prerequisite in interpreter training: interpreter bilinguals, unlike regular bilinguals, will have to learn to use their languages (and the underlying skills they have in them) for similar purposes, in similar domains of life, with similar people. This is something regular bilinguals do not often need to do (*Ibid.*: 168).

Grosjean points out that the CPM explains why the bilingual's profile may change over time. He expands on this (Grosjean 2010) by detailing his own personal profile which shows five changes in his L1 over his seven decades as a result first of being sent to boarding school, then moving countries several times. In sum, Grosjean's Complementarity Principle Model contributes to this research in four ways: (i) it explains why most bilinguals master some or all of their linguistic capabilities better in one of their languages than in the other due to factors such as regularity of language use, language access and attrition; (ii) it illustrates the complexity of unique individual bilingual profiles; (iii) it shows that whatever the level of mastery, the individual profile continues to change over time and according to context; and (iv) it elucidates why bilinguals may not necessarily be good interpreters.

#### **2.4 Age of Acquisition and a Critical Period**

The distinction between simultaneous and sequential bilinguals is usually defined through age of acquisition (AoA). Simultaneous childhood bilinguals are exposed to two languages from birth at the same time and are undergoing a process initially named 'bilingual first language acquisition' (BFLA) by Meisel (1989); 'infant bilingualism' (De Houwer 1990) and 'bilingual acquisition' (*Ibid.*). Sequential childhood bilingualism occurs when a child is exposed to and acquires a second language after the first. A further distinction is made between early sequential bilinguals who acquire their second language while still in the process of acquiring their first and late sequential bilinguals who acquire their second language when they have a strong foundation in the first (Hernandez and Li 2007; Kalia, Wilbourn, and Ghio 2014; McLaughlin 1978). Beardmore (1986: 28) defines early bilingualism as 'the acquisition of more than one language in the pre-adolescent phase of life' and late sequential bilingualism when the first language is acquired before the age of 11.

Although AoA can be used as an indicator, there is no agreement on an exact threshold between simultaneous and sequential bilingualism. Bilingual type has

also been determined according to important individual developments in L1 syntax, morphology, semantics and phonology (Heredia and Cieślicka 2014). These are understood to be mastered around the age of four (Uccelli & Pan, in Gleason and Ratner 2016; Stoel-Gammon and Menn 1997; Tager-Flusberg and Zukowski 1997). L1 learners are deemed to master pragmatics by the age of seven (e.g. Bryant 2013). A later cut-off age of 12-14 has also been proposed (Johnson and Newport 1989; Polinsky 2005), although this has been criticised (Hakuta, Bialystok, and Wiley 2003; Hernandez and Li 2007; Weber-Fox and Neville 2001).

Where there is considerable literature on the cut-off of defining simultaneous bilinguals, there is less on defining sequential bilinguals. Nevertheless, there is one condition: that the L1 be reasonably well developed before the learner begins the L2. For some, that is before the learner turns three or starts school (McLaughlin 1978; Paradis 2010). Others have set the cut-off between the ages of four and seven (Montrul and Potowski 2007), at age six (Schwartz, Kozminsky, and Leikin 2009), at age seven-and-a-half (Kaushanskaya, Blumenfeld, and Marian 2011), older than nursery age but before adolescence (Kohnert, Bates, and Hernandez 1999) and between the ages of five and 24 (Illes et al. 1999). According to Heredia and Cieślicka, the suggested threshold to be considered a sequential bilingual is age four (Heredia and Cieślicka 2014).

McLaughlin's (2013) age criterion is often used to make the distinction: children who acquire two languages simultaneously before the age of three are considered simultaneous bilinguals and children who acquire one language in infancy and another after the age of three are regarded as sequential bilinguals. Baker endorses this criterion, if somewhat more elastically - 'after about three years of age' (2011: 3). For the purpose of this research, therefore, the age of three will be used to mark the threshold between the simultaneous and sequential bilingual participants.

The AoA approach led to the view that there is a critical moment in the child's life before which it is easier or better to acquire the second language. There has been much debate surrounding whether it is better to learn a language earlier. The Critical Period Hypothesis (Lenneberg 1967) postulated that there is a critical period, which ends once puberty begins, after which it is no longer

possible to achieve native-like levels in a language. Neuroplasticity is the reason this linguistic attainment cannot be reached as once the brain begins to lose plasticity with age, the ability to learn languages is also lost. Lenneberg's (*Ibid.*) argument was that it is possible for those who begin learning a second language before the critical period comes to an end to acquire native-like levels but those who begin learning outside this period will need to be taught explicitly.

Much research has been carried out on the effect of age of acquisition on the ultimate attainment of an L2. There is no consensus as to whether a CP even exists and, if it does exist, when it begins and ends (De Groot 2011). Johnson and Newport's (1989) investigation of a possible CP in SLA suggested that native-like proficiency in a second language was impossible beyond age seven, supporting a maturational account of language acquisition. However, follow-up investigations demonstrated the opposite effect (Bialystok and Hakuta 1994; Birdsong and Molis 2001). Birdsong (2005) concluded that older learners possess superior processing skills and cognitive abilities, enabling them to grasp abstract ideas and allowing them to learn a second language more quickly and efficiently than younger children. Explicit learning gives adults an advantage in the initial stages but falls short when explicit rules do not aid understanding (DeKeyser and Larson-Hall 2005). Birdsong's (1992) study showed that the average performance of a group of near-native speakers of French was below that of the native group, but that the near-native-speaker group did include adults performing significantly better than the native speakers. Piller's (2002) investigation of adult L2 users of English and German who pass as native speakers similarly highlights how high rates of achievement are often neglected and under-reported. In his comparison of use of interrogative forms in native and near-native French speakers, Donaldson (2016) notes that the near-natives display comparable choices and that these choices are 'both communicatively and socio-stylistically appropriate' (*Ibid.*: 467). He concludes that the near-natives 'successfully integrate syntactic, semantic, communicative, and sociolinguistic information in spontaneous conversation' (*Ibid.*: 467). The relevance of these findings for this study is that near-natives, i.e. sequential bilinguals, may in fact have achieved adequate proficiency levels to match those of simultaneous bilinguals in SI tasks.



Marinova-Todd *et al.* (2000: 28) conclude that ‘age does influence language learning but primarily because it is associated with social, psychological, educational and other factors that can affect L2 proficiency, not because of any critical period that limits the possibility of language learning by adults’. The young bilinguals in studies reviewed by Marinova-Todd *et al.* (*Ibid.*) tended to perform similarly to each other but the older learners showed great variation in their language competence. In their summary of the CP debate to date, Singleton and Ryan (2004: 227) conclude that ‘the idea of a critical period specifically for language development may well have had its day’. Singleton and Ryan suggest that age factor issues may not be simply evidence of a pre-programmed CP with regard to language learning itself but involve general decline brought about by ageing and, more importantly for this research, other factors such as motivation, exposure and instruction.

Fuchs and Flügge (2014: 1) review four decades of research on adult neuroplasticity and conclude that significant changes have taken place in views of how plastic the adult human brain may be. Chronic stress, for example, which was once thought to have had only negative influences, has now been found in some circumstances to enhance brain neurons. Where the brain was once viewed as an organ that was non-renewable, research into adult neurogenesis has shown that parts of the central nervous system are in fact capable of neuron-replacement (Gould *et al.* 1999). To date, however, it is not known to what extent neuron-replacement in the adult brain is possible. Fuchs and Flügge (2014) emphasise that there are many remaining unanswered questions and draw attention in particular to a hypothesis by Gould *et al.* which suggests that hippocampal neurogenesis could play a critical role in learning and memory, but similar research on other adult animals did not corroborate this (Koehl and Arous 2011). In any case their findings cannot be extrapolated to humans. Fuchs and Flügge conclude that it is widely agreed that the adult brain is ‘far from being fixed’ (Fuchs and Flügge 2014: 1) and that it is prudent to keep an open mind on the influence of neurogenesis on cognitive functions.

Birdsong (2018) draws together the threads of much of what has been discussed in this section: like Grosjean, he underscores the role of the uniqueness of both the simultaneous and sequential bilingual which he terms ‘inter-individual variability’ or ‘non-uniformity’ (*Ibid.*: 1) and, like Singleton and Ryan,

highlights the role of motivation, as well as LOR in an L2 environment, range of years of study and types of education. He points to the complex interaction of these variables with both AoA and brain plasticity.

## 2.5 Balance/Dominance and Individuality

Early classifications of bilinguals were based on the degree of competence or ‘proficiency’ in each language separately. These range from the minimalist end of the scale with incipient bilingualism (Diebold 1961), where those who have mastered little more than a few utterances in a second language, for example, could be classed as bilingual. Haugen’s definition (1953: 7) of ‘the point where a speaker can first produce complete meaningful utterances in the other language’ and Hall’s (1952: 14) ‘at least some knowledge and control of the grammar structure of the second language’ lie towards the middle of the scale. Bloomfield (1933: 56) envisaged that the maximalist end of the scale required a ‘native-like control of two or more languages’. A definition of native-like control in two languages is highly problematic as it assumes a degree of balance which cannot be taken for granted. Baker (2011: 8), for example, requires a balanced bilingual to be ‘approximately equally fluent in two languages across various contexts’. In practice, the so-called balanced bilingual is a ‘rare if not non-existent species’ (Baetens Beardsmore 1986: 7) due to diverse and shifting patterns of language dominance, with different domains of language use, preference, for example. One view of dominance is defined by Valdés (2003), who places bilinguals on a continuum which covers the different strengths of their two languages A and B. In the context of working with immigrant children she prefaces one presentation of her continuum thus: ‘Although absolutely equivalent abilities in two languages are theoretically possible, [...] individuals seldom have access to two languages in exactly the same contexts in every domain of inter-action. [...] They thus do not develop identical strengths in both languages’ (Valdés 2005: 414). Her continuum is represented as follows:

**A<sub>b</sub> A<sub>b</sub> A<sub>b</sub> A<sub>b</sub> A<sub>b</sub> AB BA Ba Ba Ba Ba Ba**

In the middle is the theoretical ‘balanced bilingual’ **AB/BA**. Dotted along the continuum on either side of the balanced bilingual are those with varying degrees of bilingualism, notated with different sized fonts and cases to indicate strength: recently-arrived immigrants would be classed as **A<sub>b</sub>**, where **A** is the immigrant

language and ь the new language being acquired; grandchildren or great-grandchildren of immigrants would conversely be classed as **B<sub>a</sub>**, having acquired the majority language of the country they have been born into while retaining some proficiency in the immigrant language.

Birdsong (2014: 1) defines dominance as ‘observed asymmetries of skill in, or use of, one language over the other’, which can be determined along two conceptually separate axes: dimensions and domains. On the dimensions axis he places ‘linguistic competence, production, and processing’ (*Ibid.*: 2) which can be tested within the two languages to assess the intrinsic abilities of the individual bilingual. On the domains axis he places ‘situations and contexts of language use’ (*Ibid.*), pursuits chosen by the bilingual or environments in which they find themselves. Domains are thus the ‘contexts and activities in which various dimensions of language ability are engaged’ (*Ibid.*: 3). This definition of the relationship between dominance and domains gives helpful pointers to the multi-faceted nature of dominance, depending on the type of test being applied to the bilingual participants in any particular research project. Assessing the inherent abilities of the individual bilingual by means of testing the dimensions of dominance as Birdsong sees them will form a central part of this research.

## **2.6 Dominance and Proficiency**

Dominance, as seen above by Valdés, refers to the relative strengths of each of the bilingual’s languages: bilingualism may range from the rare equi-lingual, who has two native languages, to the second-language learner, who may have widely differing strengths in each. Dominance is measured by relative proficiency in each language, that is, the degree of competence in the basic language skills of reading, writing, listening and speaking. Birdsong (2014: 3), however, contrasts dominance and proficiency, seeing the former as a ‘matter of internal reference and relativity’ because assessments of domains and dimensions of the L2 are compared with the domains and assessment in the L1 in the same user. Proficiency is assessed with reference to norms external to the individual L2 user, usually by comparisons with monolingual native speaker controls or presumed norms of the L2. He points out that if dominance is internally relative then a bilingual who is dominant in one language cannot be assumed to have high proficiency in that language but only less proficiency in the other. If a comparison is made between two balanced bilinguals, one with

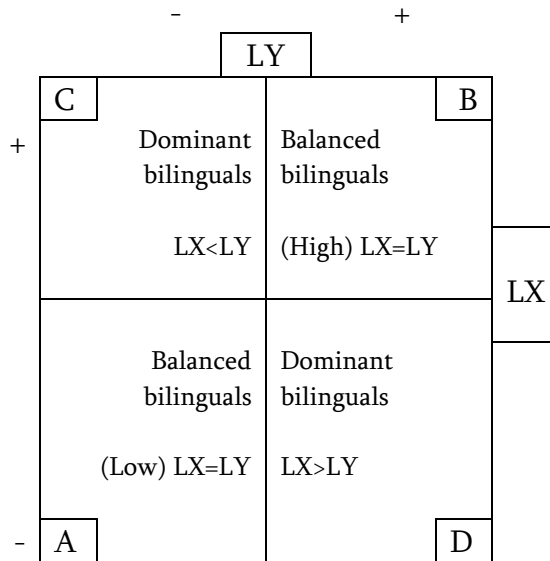
balanced high proficiency in both languages and the other with balanced low proficiency in both languages, it becomes obvious that proficiency and dominance are also two separate constructs. For him, proficiency is a dimension of dominance in the same way as reading speed or speech rate, which can be independently assessed but do not necessarily correlate. This has implications for the assessment of the SI task, which breaks down the performance of each of the participants into 14 criteria to be applied bi-directionally. Birdsong concludes:

it should be borne in mind that a bilingual's proficiency in the dominant language cannot be expected to be identical to that of a monolingual native speaker of that language. Because of well-understood bidirectional influences in the two languages, non-monolingual-likeness in terms of proficiency (and likewise on other assessed dimensions) is a defining characteristic of bilingualism (*Ibid.*: 4)

Treffers-Daller (2016: 235) has pointed to the 'considerable amount of terminological confusion over balance and dominance'. She argues that 'the notion of balance is problematic, both conceptually and operationally' (*Ibid.*: 263) and notes the recent tendency to consider dominance as relative proficiency. She argues that there is no such thing as 'global or generic dominance' (*Ibid.*: 261), preferring to depict dominance 'in relation to a specific criterion, selected by the researcher', (*Ibid.*: 261) where 'dominance is task-specific and domain-specific' (*Ibid.*: 265):

we appreciate that it is possible to have different views of what a bilingual is but think it is reasonable to expect there to be a link between an author's definition of bilingualism and his/her definition of language dominance. (*Ibid.*: 262)

She depicts (Figure 2) a typology of adult language dominance based on language proficiency on an X/Y axis which produces four quadrants illustrating different combinations of proficiency in the bilingual's two languages 'with respect to the researcher's chosen specific criterion' (*Ibid.*: 261): quadrant A, balanced bilinguals who have a low competence in both languages (if such bilinguals exist); quadrant B, balanced bilinguals who have a high proficiency in both languages; quadrant C, bilinguals who have a higher proficiency in L2 than in L1 (typically heritage speakers); quadrant D, bilinguals who have a lower proficiency in L2 than in L1 with (typically late bilinguals).



**Figure 2: Typology of language dominance based on language proficiency (Treffers-Daller 2016). (The X-axis represents proficiency in language X; the Y-axis represents proficiency in language Y.)**

Treffers-Daller (2016) contrasts those researchers who, in their definition of bilinguals, prioritise proficiency and those who prioritise maintained usage but warns that bilingualism is a multi-dimensional construct and that both proficiency and usage are essential components of the bilingual experience. Both must, therefore, be taken into consideration. She suggests the term ‘language ability’ is to be preferred over proficiency as it is a broader construct which emphasises not just specific language skills but also communication skills such as cultural and social competence. She advises that:

Further research into language dominance could therefore concentrate on the wider range of knowledge and skills that fall under the construct of language ability, as it is likely that new insights into language dominance will emerge from such studies (Treffers-Daller 2016: 262-3)

Grosjean (2016) points to the fact that his Complementarity Principle Model, which puts the emphasis on language use, has been influential in Treffers-Daller’s (2016) conclusions that dominance is a relative notion. He draws attention to the importance of taking into account the speed and efficiency with which bilinguals process their two languages and criticises researchers for minimising the complexity of the bilingual's language knowledge and reducing testing to a few simple tasks given in only one language.

This section has explored definitions of bilingualism and summarised the factors which make for the unique profile of each individual bilingual and which are likely to influence the performance of the participants in this study as they undertake the SI tasks: AoA, order of acquisition, balance, dominance, domains and proficiency. Particular attention has been paid to the contribution of Grosjean and his Complementarity Principle Model (2008). The next section will examine childhood bilingualism which has been the springboard for much of the current research on adult bilingualism.

## **2.7 The Bilingual Child and The Bilingual Advantage**

Original concerns in bilingualism were pedagogical (Cummins 1981; Peal and Lambert 1962; Valdés 2003), arising from early arguments for and against bilingual education which emerged in the US and Canada with regard to their large immigrant Spanish and French communities respectively. Subsequent research in the field of psycholinguistics (Bialystok et al. 2004; Costa et al. 2009) found that, contrary to expectations, bilinguals may in fact have a cognitive advantage over their monolingual counterparts. This has become known as the bilingual advantage (Cummins 2000; Galambos and Hakuta 1988; Genesee 2009; Prior and MacWhinney 2010b).

Early work was characterised by the belief that bilingualism impacted negatively on cognitive development, with many researchers advocating monolingual education only (Petitto et al. 2001). It was argued that bilingualism could result in language confusion and impede language development in children (Petitto et al. 2001; Portes and Schauflyer 1994). Darcy (1953) provided a review which highlighted monolingual superiority over bilinguals in both non-verbal and verbal tasks. However, there were methodological flaws in this research: tests were conducted in English, which meant that monolinguals were bound to outperform bilinguals in the bilinguals' weaker language. Additionally, researchers did not ensure that participants were matched in terms of socio-economic status (SES), which resulted in monolingual children with middle-class backgrounds being compared with underprivileged or working-class bilingual children. When researchers matched SES and age, no significant differences were discovered between monolingual and bilingual participants (Arsenian 1937) and the bilingual children who performed better were those whose second language was in more regular use (Arthur 1937; Bere 1924).

The 1960s represented a turning point as research began taking into account the role of social status and living environment in language development (Cummins 1981; Lambert and Tucker 1972; Peal and Lambert 1962). Peal and Lambert's (1962) ground-breaking study overturned the earlier belief that bilingualism has a negative impact on cognitive development. Findings showed that monolingual participants were outperformed by bilingual participants in a number of tests, which demonstrated for the first time that having to manage two languages may in fact result in greater cognitive flexibility in bilinguals. Peal and Lambert's study encouraged researchers to explore the positive links between cognitive development and bilingualism. Bialystok (1986b), for example, asked five- to nine-year old monolingual and bilingual children to decide if certain sentences in English were grammatically acceptable or if they could be deemed acceptable despite having an unusual meaning (e.g. 'Apples grow on noses'). In terms of evaluating whether sentences were grammatically correct, the results of the monolingual and bilingual children were comparable. However, when it came to recognising semantic acceptability despite unusual meanings, more correct answers were given by the bilingual children than by the monolingual children.

Research on the effects of bilingualism on cognition has moved beyond linguistic tasks: findings from non-verbal tasks, like problem-solving (Bialystok 1999; Bialystok and Majumder 1998; Bialystok and Martin 2004) and mathematical/numerical tasks (e.g. Bialystok and Codd 1997) are in line with findings from verbal tasks (Bialystok and Codd 1997; Kessler and Quinn 1980, 1987), indicating that bilinguals also outperform monolinguals in these areas. A bilingual advantage has consistently been noted in problem-solving tasks involving attention control and conflict resolution (Bialystok 1986a, 1988, 2006, 2007; Bialystok et al. 2005; Bialystok, Craik, and Ryan 2006; Clarkson 2007) and bilinguals shown to outperform monolinguals in executive control and processing (Bialystok 2007, 2010; Bialystok et al. 2004; Bialystok, Craik, and Ryan 2006; Bialystok and Viswanathan 2009).

While some studies suggest that earlier second language acquisition improves executive control (Kapa and Colombo 2013; Luk, De Sa, and Bialystok 2011), others find that second-language usage and proficiency are more significant contributing factors, due to an increase in switching between languages (Pelham and Abrams 2014; Tao et al. 2011b; Vega-Mendoza et al. 2015). Many studies

have consequently credited an increased ability to shift between mental sets to a life-time of bilingualism, for example work by Prior and Macwhinney (2010b), in which a cued-task switching test led to the finding that bilingual students were more capable of ignoring interference and activated a task set following a cue faster than monolinguals.

Houtzager *et al.* (2017) replicated this test on matched older adults who did not have an immigrant background. They detected a similar bilingual advantage. Seçer (2016) investigated the impact of bilingualism on executive functions in younger adults and found that Turkish-English bilinguals completed cognitive flexibility tasks faster than monolinguals. These results echo previous findings (Bialystok 2011; Bialystok and Viswanathan 2009; Engel de Abreu *et al.* 2012) which demonstrate that adult bilinguals perform better than monolinguals in executive function tasks when demographic variables are matched. Seçer (2016) found that bilingualism contributes to skills where an individual must shift mentally between several tasks, perhaps as a result of having to alternate between and coordinate two active languages (Bialystok 2011). Her results echo other studies (e.g. Poarch and Bialystok 2015) which highlight multitasking skills as an area in which adult bilinguals have a distinct advantage.

Although Seçer (2016) and Ibrahim *et al.* (2013) tested bilingual cognitive flexibility and found a bilingual advantage in adult bilinguals, the age of SLA of bilingual participants differed. Some studies report a bilingual advantage in late bilinguals (Pelham and Abrams 2014; Tao *et al.* 2011b), while others support a bilingual advantage in early bilinguals (Kapa and Colombo 2013; Luk, De Sa, and Bialystok 2011). It remains unclear, therefore, whether acquiring a second language earlier or later facilitates executive functions (Duñabeitia and Carreiras 2015; Marzecová 2015). What is clear, however, is that there is no disadvantage in executive tasks for late bilinguals who have acquired a high level of second-language use and proficiency (Pelham and Abrams 2014; Tao *et al.* 2011b; Vega-Mendoza *et al.* 2015). Seçer (2016) posits that the extent of cognitive improvement is influenced by how much switching between languages, coordination and monitoring a bilingual does. Further, she states that research in this area would benefit from comparisons of early and late bilinguals with different levels of language use and proficiency.



Research into the cognitive effects of bilingualism has yielded mixed results. In areas such as semantic and verbal fluency some research has noted the monolingual advantage over bilinguals or the negative impact of bilingualism (Gollan, Montoya, and Werner 2002; Sandoval et al. 2010). However, some studies explored monolingual and bilingual children's awareness of arbitrary language, concluding that there was evidence of a bilingual superiority over monolinguals (Ben-Zeev 1977; Cromdal 1999; Ianco-Worrall 1972). This was also the case in studies concerning phonological awareness (Davine, Tucker, and Lambert 1971) and sentence awareness (Galambos and Goldin-Meadow 1983). Nonetheless, not all research replicated earlier findings, e.g. phonological awareness (Bialystok 1988), and, although many studies highlighted a bilingual advantage, some research reported negative effects of bilingualism in areas such as receptive vocabulary and lexical access (Bialystok, Craik, and Luk 2008a; Ivanova and Costa 2008). What is of relevance to the present doctoral thesis is that more highly proficient bilinguals outperformed lower proficiency bilinguals (Galambos and Hakuta 1988). Thus, factors which give rise to proficiency in different language areas may supersede the age of acquisition and mode of acquisition of the two languages.

Recently, de Bruin *et al.* (2015) challenged the magnitude of the cognitive advantage bilinguals might have over monolinguals, finding considerable evidence to support their view that there may be a 'file-drawer' effect: a publication bias towards studies with positive conclusions over those with null or negative conclusions. They found that studies fully supporting the bilingual advantage theory were most likely to be published, followed by those with mixed results, with studies challenging the theory least likely to be published. As Connolly (2017) points out, however, an overall analysis of publications carried out by de Bruin *et al.* (2015) indicates that even though a publication bias towards positive findings actually does exist, a significant bilingual advantage effect is still evident across those studies.

Bialystok and Craik (2010: 22), in summarising how bilingualism affects cognitive and linguistic performance across the life span, review both the benefits and costs of bilingualism and draw attention, almost as a throw-away, to the fact that 'the only negative consequences were on verbal knowledge and skill – specifically, smaller vocabularies and less rapid access to lexical items'

(*Ibid*: 22). Both issues are of significant relevance to this research. Even if across both languages a bilingual may have a vocabulary of equal magnitude to that of a monolingual, the two separate lexicons are unlikely to match each other in translation terms (Grosjean 1997), thus adding a further layer to the asymmetrical nature of the bilingual profile with respect to the SI task. Rapid access to lexical items lies at the heart of the SI task, considered the most demanding of the interpreting modes precisely because of the speed required for retrieval of all aspects of language, but particularly lexical equivalents.

One further aspect of research on the bilingual advantage which has bearing on this thesis is the issue of thresholds in linguistic competence. Cummin's (1976) Threshold Hypothesis (TH) posited that, in order for the beneficial cognitive aspects of bilingualism in children to be activated, a certain level of linguistic competence must first be reached in both languages. This threshold may vary according to the internal factor of cognitive development and the external language proficiency required principally for academic progress. This led Cummins to propose two thresholds: a lower threshold when the bilingual child reaches competence in one of their languages, at which point bilingualism will no longer impact cognition negatively, and a higher threshold of balanced competence in their second language, which, when reached, will have positive cognitive effects. Building on this work, Cummins (Cummins 1979; Cummins 1981) also proposed a distinction between two different types of language proficiency in children in the context of schooling: Basic Interpersonal Communicative Skills (BICS) – conversational fluency in the skills of listening and speaking – which can be acquired in about two years (Cummins 1979) and Cognitive Academic Language Proficiency (CALP) – academic language proficiency requiring higher-order thinking skills plus the ability to cope with varying academic demands in different subjects – which could take five to seven years to develop.

Hulstijn (2015) has mirrored this thinking in terms of a similar proficiency threshold for adults with his relatively recent theories of Basic Language Cognition (BLC) and Higher Language Cognition (HLC). BLC Theory visualises language cognition as a dichotomy, not a continuum. Hulstijn (2015) posits that in the domains of lexis and morphosyntax there is a minority of elements (words, constructions, expressions) which occur very frequently and a

large majority of elements which occur infrequently. In simple terms BLC refers to the largely implicit, unconscious linguistic knowledge (e.g., phonology, phonetics, prosody, morphology, syntax, lexicon) that all L1 speakers of a given language have in common, along with the automaticity with which these types of knowledge can be processed. BLC is restricted to the frequent lexical items and grammatical structures, that is, to the lexical items and morphosyntactic structures that may occur in any communicative situation, regardless of age, literacy, or educational level. HLC is a development beyond BLC to include utterances that contain low-frequency lexical items or uncommon morphosyntactic structures, in other words an extended or more specialised type of language knowledge. Hulstijn (2015) further visualises BLC forming a ‘core’ knowledge which HLC encompasses but around which it also forms a ‘periphery’ (*Ibid.*: 1). These ‘peripheral’ abilities closely reflect the kind of higher language cognition necessary for the satisfactory completion of the task of SI: appropriate accurate oral communication under stress (*Ibid.*: 1).

In this context, Hulstijn (2015) defines a native speaker as someone who has acquired BLC and who may have acquired some or many elements of HLC. Thus, all cognitively healthy adult L1 users will perform well in BLC tasks involving two language modes – listening and speaking – but there will be noticeable individual differences in HLC tasks in all four modes of language use – listening, speaking, reading and writing. It is only the first two of these that will be tested in the SI task proposed by my research but the corollaries of his theory, which Hulstijn (2011) then continues to expand on, are highly relevant to the assessment of the participants’ SI performances: simultaneous bilinguals can reach native-speaker proficiency in more than one language as long as they have minimally acquired BLC in each; continued daily usage and practice are essential to the maintenance of BLC in both languages; late learners will usually not become as proficient as simultaneous bilinguals in pronunciation but can emulate them in HLC even if they have some deficiencies in their BLC, provided they are matched intellectually, educationally, professionally and culturally. In sum, the age-of-acquisition factor is moderated by these latter factors along with exposure and productive language usage.

To summarise, the factors which affect the unique profile of each individual bilingual are seen also to have a strong bearing on the likelihood of a bilingual

advantage for both child and adult bilinguals over monolinguals as a result of their constant need to manage and switch between their two languages. A first gap has been noted, however, in research on an intra-bilingual advantage in a task such as SI which depends heavily on cognitive flexibility, attention control and switching between mental sets. Research on adult bilinguals has now extended to university students and ageing adults but a second gap has also been noted in research on the remainder of adult bilinguals over the course of their working lives. The next section addresses the research that has been carried out among brain-injured bilinguals, who, for the most part, are adult bilinguals, the increasing role of neuro-imaging and how the bilingual stores their two languages.

## **2.8 Language Storage, Access and Retrieval**

Models of memory over many decades give the theoretical context within which the general concepts of storage and retrieval of all information are understood to lie. Early models based themselves on behaviourist theory, including linguistic models (Petri and Mishkin 1994; Skinner 1957), which emphasised scientific and objective methods. This approach concerned itself with observable stimulus-response behaviours and considered that all behaviours are learned through interaction with the environment.

A subsequent shift to cognitive theories viewed the mind as an information processor, similar to a computer, and outlined a basic linear model of input, storage, processing and measurable output. The pioneers of this approach, Atkinson and Shiffrin (1968), suggested in their Multi-Store Model that memory consists of three separate stores, the Sensory Memory Store (SMS), the Short-Term Memory (STM) and the Long-Term Memory (LTM). During the Sensory Memory stage, sensory information from the environment is stored extremely briefly, usually about half a second for visual information and three or four seconds for auditory information. Only certain aspects of this sensory memory are retained, allowing some of it to pass to the next stage - STM. Most of the information stored in STM will be kept for about 20 to 30 seconds. Most short-term memories are quickly forgotten but attending to this information allows it to continue to the next stage - LTM, which refers to the ongoing storage of information. This information is largely beyond awareness but can be called into

working memory to be used when needed. Some LTM information is easy to recall but other memories are more difficult to access.

As the increasingly complex structure of the brain became apparent, however, an alternative model, the Levels-of-Processing Model, was proposed by Craik and Lockhart (1972), stressing the semantic processing which takes place in LTM. They posited that information is transferred to LTM through rehearsal, that is by repetition, and suggested that the level or depth at which it is processed will determine both its place in LTM and how well it will be recalled. They envisaged a continuous scale of mental processing from shallow (perceptual) to deep (semantic), whereby the deeper the level of processing, the more lasting the memory. With this model there is no real structure to memory and no distinction between STM and LTM. Stein and Bransford (1979) broadened this idea by adding that information will be more easily retrieved if the way it is accessed is similar to the way in which it was stored.

Tulving (1972) proposed a breakdown of LTM to distinguish between procedural, episodic and semantic memory. Procedural memory is responsible for knowing how to do things, that is motor skills like cycling involving unconscious, automatic thought. Semantic memory, involving conscious thought, is responsible for storing information about the world, including knowledge about the meaning of words, as well as general knowledge. An example could be: Dublin is the capital of Ireland. Episodic memory is responsible for storing information about events experienced - for example, one's eighteenth birthday - also involving conscious thought. Cohen and Squire (1980) drew a clearer distinction between declarative and procedural knowledge. The latter involves knowing how whereas the former involves knowing that. Recalling information from declarative memory involves conscious effort – it is brought to mind and “declared”. Evidence for this relies on research with amnesic patients, showing that their memory of events and knowledge gained before amnesia set in seems to survive but new episodic or semantic memories, which are declarative, cannot be stored. Procedural memory appears to be largely unaffected: they can recall learned skills and acquire new ones.

Baddeley and Hitch (1974) suggested that STM is more than a simple unitary store comprising several sub-systems, chiefly the Visuo-Spatial Sketchpad and the Phonological/Articulatory Loop, monitored and co-ordinated by the Central Executive. The Visuo-Spatial Sketchpad deals with what information looks like and how it is arranged. The Phonological Loop retains spoken information for about 1.5 to 2 seconds. Written words must be converted to spoken words to enter the phonological loop. The Articulatory Loop rehearses the spoken/acoustic information from the phonological store and also converts written material to acoustic material so that the Phonological Loop can process it.

Research on forgetting was conducted in parallel with research on retrieval. Researchers suggest that there are four possible reasons for why forgetting may occur: retrieval failure when information is simply lost from memory, interference when, for example, memories compete with one another, failure to store correctly and motivated forgetting, where people deliberately try to forget things they do not wish to remember (Loftus 1980; Nickerson and Adams 1979). According to retrieval-failure theory, forgetting occurs when information is available in LTM but is not accessible. Accessibility depends in large part on retrieval cues. Forgetting is greatest when context and state are very different at encoding and retrieval: retrieval cues are absent and the likely result is cue-dependent forgetting. Miller (1956) suggested the idea of displacement in STM, that the capacity of STM is limited to 7 +/- 2 items or chunks of information after which STM is full and some old information must be displaced for new information to enter.

A paradigm shift occurred with Rumelhart and McClelland's (1986) connectionist model, Parallel Distributed Processing, which drew on emerging neuroscience research and is now regarded as the seminal model in the field. It proposes that different parts of the brain store information simultaneously and link together to form a network. The number of connections within the network dictate how easily single items of information are retrieved. Petri and Mishkin's (1994: 36) work has pointed to the probable existence of 'two systems of learning and retention' in the brain, corroborating findings in both the behaviourist and cognitivist fields: 'these two systems use different circuitry, store different aspects of experience and follow different rules of storage' (*Ibid.*:

36). Access to storage would then also differ depending on the availability or unavailability of memories or habits to conscious awareness. Ongoing connectionist models have stressed ‘mechanisms of change’ within the brain over time as it has developed and learned (McClelland and Cleeremans: 1).

All these models and theories of memory and forgetting have in turn influenced and informed how psycholinguists and neurolinguists have approached over the decades the study of memory issues in bilinguals. However, the way in which the bilingual brain stores and manages two languages remains, after decades of research, largely unresolved. There are at least two possibilities: either the brain stores both languages together or it stores each language separately. Prior to the advent of neuro-imaging, early terminology dated back to the distinction made by Weinreich (1953) between the acquisition of two languages in the same context which produced ‘compound bilinguals’, with two separate phonological representations of words but a single and common representation of meanings, and the acquisition of two languages in different contexts which produced ‘co-ordinate bilinguals’, with sounds and meanings separate for each language. Compound bilinguals were thought to store their languages interdependently whereas co-ordinates maintained independent stores (Gekoski 1980).

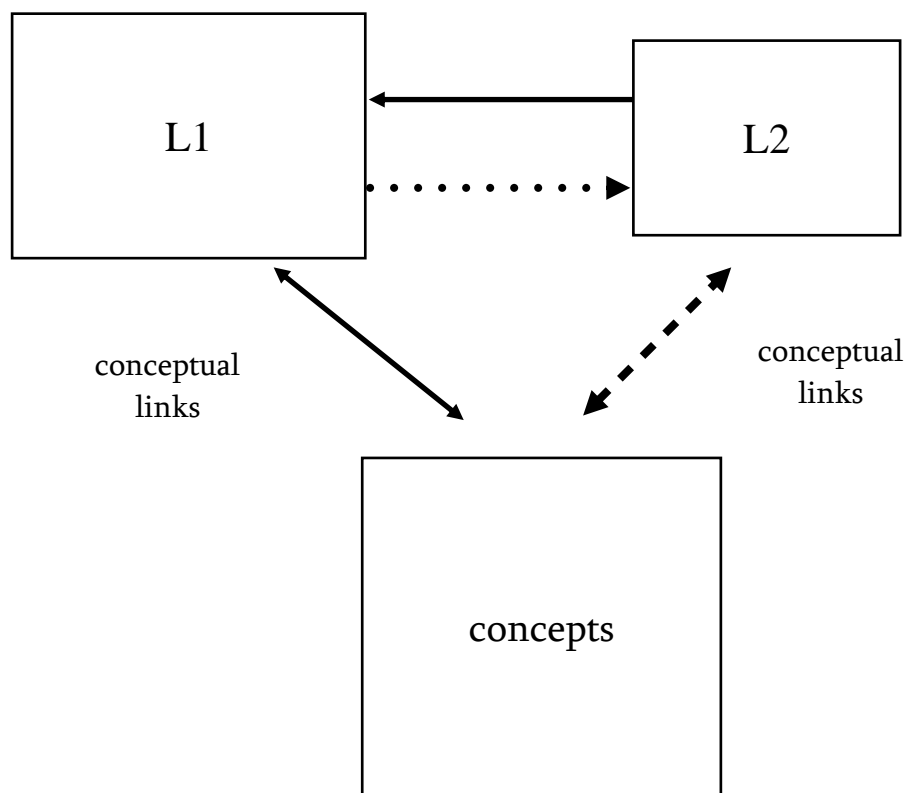
Ervin and Good (1954) emphasised the specifically cultural context of language acquisition, envisaging one mode for bilinguals learning their languages in two culturally distinct environments where they will develop different lexico-semantic representations, one for each language; and a second mode if they acquire their two languages in the same cultural context, where they will develop two lexicons associated with the same conceptual system. A third group, those who acquire a second language later in life, will develop a subordinate system where the meanings of words in the second language are mediated by access to concepts in the first by a translation process.

Potter *et al.* (1984) proposed a word association model and a concept mediation model which distinguished between low-proficient bilinguals who accessed concepts through their first language and high proficient bilinguals who could access concepts directly from both their languages. However, directionality was also seen as a factor as it was noted that both low and high proficient bilinguals

were faster and more accurate in translating from L2 to L1 than from L1 to L2 (Chen and Leung 1989; Dufour and Kroll 1995; Kroll and Curley 1988).

Kroll and Stewart (1994) explained this phenomenon in their Revised Hierarchical Model (see Figure 3) by drawing attention to the relative strength of the links between words and concepts in both languages as second language learning progresses. They hypothesise that at first L2 has stronger links to L1, the first and dominant language, marked by a solid link line in that direction, while L1 is connected to L2 by a weaker dotted line. The link between L1 and Concepts is strong in both directions, whereas the link between L2 and Concepts is weak in both directions. As L2 competence becomes stronger the links between L1 and L2 and also the link between L2 and Concepts becomes stronger with the result that L2 lexical access becomes less dependent on L1 mediation, i.e. translation. Kroll and Sholl (1992) come to more nuanced conclusions regarding SLA, proposing that lexicons in each language are stored separately but concepts are stored in a representation common to both languages. As competence in the new language increases, there is a parallel move from lexical mediation towards conceptual mediation but with retention of the former after the latter has been achieved.





*Figure 3: Revised Hierarchical Model, adapted from Kroll and Stewart (1994)*

According to these views, the translation process is then far from clear-cut. If the separate and overlapping storage models mirror the sequential/simultaneous divide, this suggests that simultaneous bilinguals, who have acquired both languages in contexts more similar than dissimilar, would constitute compound bilinguals and store their languages interdependently, whereas sequentials, who have by definition acquired their languages in differing - and possibly widely differing - contexts would constitute co-ordinate bilinguals storing their languages independently. However, the initial AoA proposition may be qualified by the role of proficiency as L2 gains over time by sequentials may modify storage conditions which will gradually approximate to those of simultaneous bilinguals. This in turn may affect the translation process and sequentials may be indistinguishable from simultaneous bilinguals in the SI task.

Flynn *et al.* (2005: 768) link the 'nature of the acquisition process' more concretely with the 'ultimate organisation of the grammars' (*Ibid.*) in the mind of the simultaneous bilingual, the sequential bilingual and the late learner and conclude that there is no consensus on whether there are essential differences

(*Ibid.*). Hernandez *et al.* (2005) believe that, from their competition and entrenchment position, and bearing in mind that bilinguals do not live in two completely unconnected cognitive worlds, storage overlap in general is greater than may be thought and that:

[T]he ability of the network [within each lexicon] to develop modular representations for different languages and different linguistic categories provides a concrete illustration of Bates's dictum that 'modules are made, not born.' The Competition Model also predicts that bilingual children will acquire phonological and lexical maps that pull their two languages apart in a similar way. We do not predict that this type of code-based separation occurs for underlying distributed conceptual representations, but only for mappings at the levels of lexicon, phonology and parts of speech (*Ibid.*: 221).

This would point to different elements within language, not just the entirety of each language, being linked or stored separately and translation then taking place more indirectly at subliminal levels in more complex ways. This will be important when the SI task is assessed according to different language (and non-language) criteria. Further work by Hernandez *et al.* (2010) did not find evidence to support the existence of functional direct lexical links to support translation. Hughes *et al.* (2014), on the contrary, conclude that translation occurs, at least partly, by means of direct lexical links between languages with reduced semantic mediation.

Dong *et al.* (2013) find evidence that bilinguals may start out with separate conceptual systems but these will gradually merge as acquisition proceeds and they will eventually have the same conceptual system for both languages. Their results indicate that 'bilinguals tend to integrate conceptual differences between translation equivalents, but that they also display a "separatist" tendency to maintain the L1 conceptual system in the representation of L1 words and to adopt the L2 conceptual system in the representation of L2 words' (*Ibid.*: 221). Their conclusions point therefore to a shared, distributed, asymmetrical model for the bilingual mental lexicon where both languages will continue to influence each other into the future (*Ibid.*).

Cook advances a comprehensive approach which allows for multiple variation within storage possibilities. He postulates the existence of an integration continuum (Cook 2002) to reconcile the two extremes of total separation and total integration in the storage debate, while recognising that neither of the extremes themselves may be a wholly tenable position (Cook 2003). Since the two languages are within one mind they must be interconnected in some way.

However, bilinguals can keep their languages apart, albeit to different degrees. Cook thus envisages multiple types and degrees of interconnectedness and also that separate elements of language like lexicon and phonology may be positioned at different points on the continuum and may or may not overlap and that the continuum may apply in different ways to different bilinguals and at different stages of L2 acquisition.

Research on neuro-imaging, which focuses on the underlying neural systems, has now added a new dimension regarding how cognitive mechanisms in the bilingual brain function. The fundamental question is whether there is one shared neural system or two separate neural systems. There are warnings that the high expectations raised by technical progress in this field have not been as yet fulfilled (de Bot 2008) and that pitfalls await those engaged in interdisciplinary work in disparate fields (Grosjean 2016; Sabourin 2009). Grosjean (2016) highlights the challenge to conventionally trained linguists posed by results obtained in the fields of statistics and neuroimaging which they do not have the necessary skills to analyse. Sabourin (2009) spells out the dangers:

Research of equivocal merit tends to be due to either imaging experts extending their research questions into the realms of linguistics (resulting in some linguistically unsophisticated questions) or second language L2 researchers extending their research paradigms to include neuroimaging techniques (resulting in some technically naïve questions concerning linguistic issues). (Sabourin 2009: 5)

What neuro-imaging has established is that there is significant difference in grey matter density between bilinguals who have acquired their second language before age five and those who have acquired their second language after age 10 (Mechelli et al. 2004). Early bilinguals have increased density in the left inferior parietal cortex and this region shows different degrees of structural reorganisation depending on AoA and proficiency levels. It has been noted that there is increased cortical activity in sequential bilinguals when they face additional processing demands (Hernandez and Li 2007) and also more diffused neural activity when they face language irregularities (Hernandez and Li 2007).

Tao *et al.* (Tao et al. 2011a) consider that the degree of functional connectivity within the language control network is strongly shaped by age of L2 acquisition and that this is evidenced by neuroimaging techniques. They write:

The observed increase in connectivity between language and cognitive control regions in simultaneous compared with sequential bilinguals may reflect a greater ability among

early bilinguals to meet the control demands of speaking two languages, offering a possible explanation for the apparent advantage of early bilinguals in dual language processing. In contrast, individuals who learn a second language later in life use different functional circuitry to attain second language expertise, as evidenced by greater left lateralization of the IFG. Together, our findings provide further support that the brain is shaped differentially depending on the period in development in which second language acquisition occurs. (*Ibid.*: 1170)

As stated at the beginning of this chapter, Lenneberg (1967) based his work on the theory that the brain is most plastic in early childhood and quickly decreases thereafter, but, despite his cautionary tone, de Bot (2008) now accepts that there appears to be strong evidence from neuroimaging for ongoing brain plasticity across the age spectrum. If the brain can reorganise by forming new neural connections at ongoing stages in life, after injury, for example, when the brain can compensate for lost functions by maximising those functions that remain (aphasia studies) or at any stage in adult life when anything new is learned or exercised - with the caveat that post the age of 30 this ability does show a marked decline (Mahncke et al. 2006) - then this attribute of brain plasticity may attenuate the benefit supposed by AoA and may allow for sequential bilinguals to make significantly greater progress than was originally thought in SLA.

Berken, Gracco and Klein (2017) highlight both the differences between simultaneous and sequential bilinguals in the structure and function of the brain and also the compensatory mechanisms which come into play when SLA is later in life. Using PET scanning, fMRI and structural MRI, they see evidence indicating that,

in many domains of skill acquisition, the manifestation of [...] neuroplasticity depends on the age at which learning begins. [...] Bilingualism [...] provides an optimal model for discerning differences in how the brain wires when a skill is acquired from birth, when the circuitry for language is being constructed, versus later in life, when the pathways subserving the first language are already well developed' (Berken, Gracco, and Klein 2017: 220)

Berken, Gracco and Klein pay particular attention to phonology and conclude that sequential bilinguals have uniformly poorer quality of native accent in their L2. McAllister (2000: 59) states that foreign accent may be perceived as 'the result of an unsuccessful reorganization of the system of contrastive phonetic categories of the L1.' As this information is reorganised, non-native phonetic content which has been carried over from the L1, along with information in the L2 input which has been incorrectly identified in the L2, impacts the phonetic composition in the new L2 structure. This leads to a foreign accent in the L2

speaker. Amengual (2017) also finds that early sequential English-speaking learners of Spanish differ from both simultaneous and monolingual counterparts, showing residual differences in adulthood in pronunciation of initial and intervocalic consonants B, D and G.

There are two retention and retrieval processes at work in simultaneous interpretation: while engaged in the short-term memory storage of the content and form of the input language, the simultaneous interpreter must also very rapidly access and retrieve from longer-term storage the necessary equivalent in the output language. Ardila's (2003) findings on short-term or working-memory have pointed to the presence of different neural sub-systems and also to a strong link between word frequency and lexical search reaction time: low frequency words take longer to retrieve, L2 processing is slower than L1 processing and L2 semantic search is not as efficient as in L1. This correlates with the proficiency aspects of storage discussed above.

With regard to long-term memory, Heredia and Cieślicka (2014) accept the strong link now established between mode of acquisition and mode of retrieval. Here, language-dependent recall (Viorica and Neisser 2000) comes into play and retrieval is found to be more easily accessed when the language at the time of encoding is the same as the language at the time of recall. There is also a strong link with context-dependent memory (*Ibid.*) when recall is better if the context of recall is reproduced. Retrieval is not even, however, as Marian and Kaushanskaya (2007) found when testing Mandarin/English bilingual memory recall. Retrieval in the language of encoding was found to be more accurate in both languages but faster only in the more proficient language.

Grosjean (2008) warns that memory, processing and modelling theories in bilingualism from the point of second language learning are at a very early stage, less developed than for monolingualism and prone to results which conflict. These theories also emerge overwhelmingly from tests using single lexical items with minimal stress constraints. Grosjean (2008: 264) highlights that the 'task effect' must be carefully controlled for. His points are elaborated upon in a robust and comprehensive article by French and Jacquet (2004) on bilingual memory models. They also emphasise that, in order to limit invalid interpretations, any conclusions drawn from testing on bilingual memory must

be regarded as task-specific and not extrapolated to other task areas. According to these views, existing models, then, are not applicable to continuous sequences of words, as in complete sentences or even less so to a continuous stream of sentences as required in SI. The central concern of this research, furthermore, is not with second language learning but with bilingual language use, namely a possible intra-bilingual benefit between adult participants who will be required to operate as ‘interpreter bilinguals’ (Grosjean 1997: 168), in other words adult bilinguals using their already acquired languages for a specific task, in this case bi-directional SI. SI deals exclusively with speeches to be interpreted immediately from a source language to a different target language. We will look at this process in greater detail in the next section and in Chapter 3.

Grosjean (2008) makes three further observations which clarify storage, retrieval and modelling issues in bilingualism research in general and which are particularly helpful to us at this stage. First, that in bilingual memory studies, there is confusion between two areas, representation and the way representation is tested. Kolers and Gonzalez (1980) posited that the bilingual’s linguistic representations may be dependent or independent according to the extent to which specific skills are used. Scarborough *et al* (1984) reported similar findings, stating that the way in which task demands affect retrieval and encoding may determine whether the memory system of bilinguals is integrated or separate. In light of this, we must be careful to scrutinise memory issues *ex post facto* with regard to the particular skills needed for the specific task involved in this research.

Secondly, Grosjean (2008) reminds us that different researchers suggest that it is possible for certain words in each of the bilingual’s separate lexicons to have a co-ordinate or a compound relationship and yet other words to have a subordinate relationship, particularly if language acquisition took place at different times and in differing environments. This highlights the complexity and alterability of bilingual storage issues and speaks directly to our comparison of simultaneous and sequential bilinguals, alerting us to the possible differences AoA or other factors may have.

Thirdly, Grosjean cites de Groot’s (1995) conclusion, following a comprehensive review of the literature, that the bilingual memory *per se* does

not exist: it is unlikely that the different structures occurring within each person's memory will be replicated homogeneously across all bilinguals. Influencing aspects include age of acquisition, the domains in which the languages are used, linguistic proficiency, the nature of the words and the strategies employed to learn them. Grosjean summarises by warning against classifications which underestimate the complexity of the bilingual memory.

In order to understand Grosjean's perspective of the individual bilingual in its entirety and apply it to our specific task, we turn now to his work on Bilingual Language Mode and his Interpreting Model.

## **2.9 Grosjean and the Bilingual Language Mode**

The final section of this chapter considers the importance of Grosjean's work on bilingual language mode. The overarching paradigm in both child and adult bilingualism to date has been the comparison of bilinguals with matched monolingual counterparts. Research has tended to view and test bilinguals and monolinguals in preselected homogenous groups, controlling as many of the variables (e.g. socio-economic status) as possible with each new set of results in order to validate the data more fully. Much of the research yields important pointers as to how future research might move forward but it has been conducted in such a way that bilinguals are tested in monolingual mode in one language and then, possibly also, but not necessarily, in monolingual mode in their second language. This doctoral research, however, aims to explore the bilingual group in bilingual mode, a consideration which Grosjean argues should be taken into account at all times (Grosjean 2008: 39).

Relatively early in bilingualism studies Grosjean (Grosjean 1982, 1985) proposed a "(w)holistic" view of bilingualism, to counterbalance the dominant role of monolingualism in research methodology. He warned against a 'fractional' or 'monolingual' view of the bilingual, where the bilingual is seen to be 'the sum of two complete or incomplete monolinguals' (Grosjean 2008: 13) and is considered to have two separate sets of isolated linguistic competencies. As a result, any language interference in the form of code-switching or borrowing is seen as careless language use (Grosjean 2008). Therefore, the monolingual mind, with one 'complete' language, is perceived as being more 'normal', the monolingual perspective is used as a yardstick and

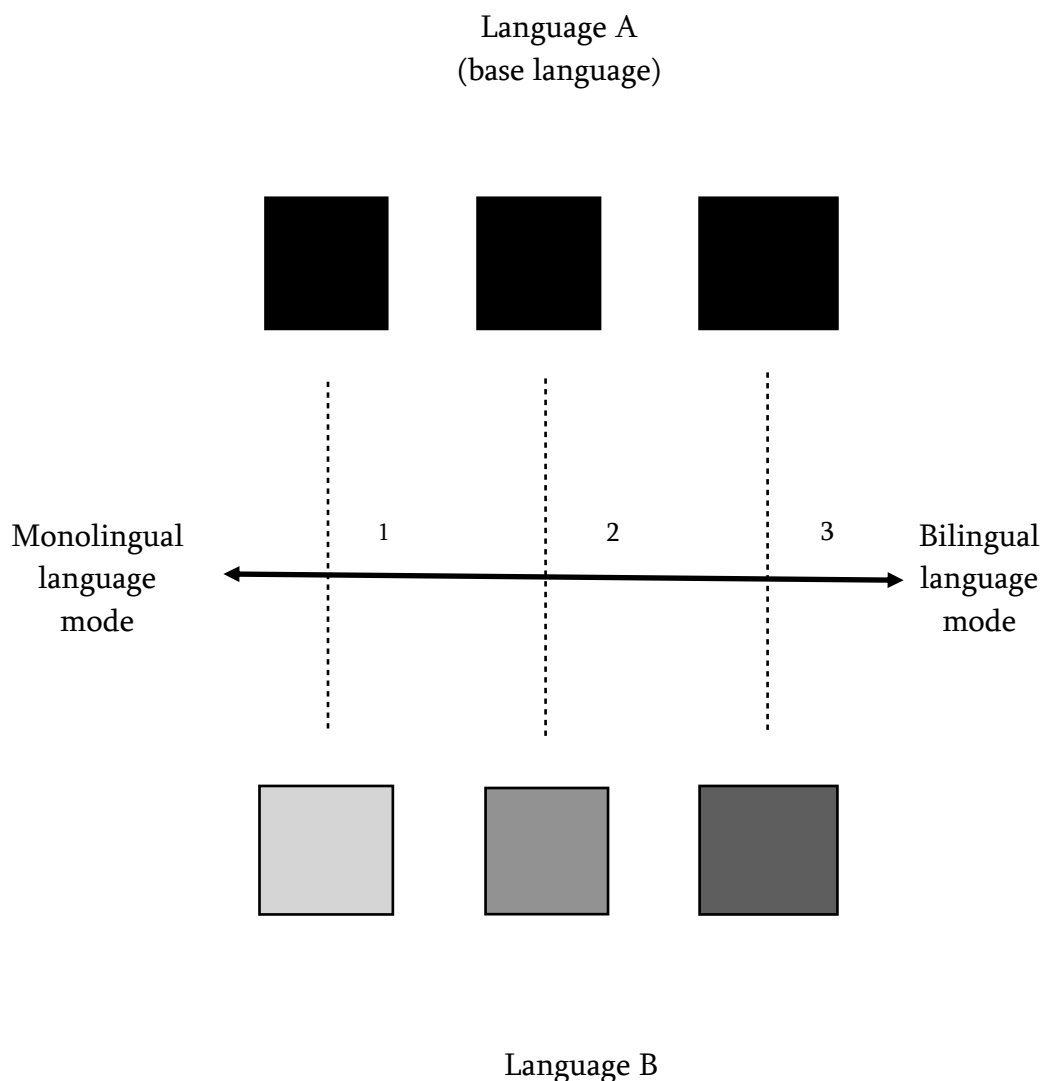
native speaker language scores are frequently used by way of comparison when measuring the linguistic competence of bilinguals. The linguistic ability of a bilingual is expected to be in line with that of a monolingual and if this is not found to be the case it can prejudice the bilingual's case.

Grosjean's holistic interpretation views bilinguals as 'integrated wholes' (*Ibid.*) with 'a unique and specific linguistic configuration' (*Ibid.*), different from monolinguals but equally valid. They are 'perfectly competent speaker-hearers in their own right' (*Ibid.*). Bilinguals develop a unique competence in line with their needs and as a result of the differing contexts in which their two languages are used. It follows that the monolingual speaker should not be used as a yardstick to measure the proficiency of bilinguals due to qualitative and quantitative differences between the two groups. The communicative ability of bilinguals cannot be measured through the medium of one language alone; instead, each individual's linguistic repertoire as it is used daily should be studied (Grosjean 2008). This research adopts Grosjean's theoretical perspective: as outlined earlier, it starts from the premise that each bilingual's language profile is unique and does not compare bilinguals with monolingual controls. The bi-directional tasks will also ensure measurement of both of the bilingual's languages.

Grosjean (2008) developed the concept of language mode, describing it as 'the state of activation of the bilingual's languages and language processing mechanisms at a given point in time' (Grosjean 2008: 61). Language mode explains the differences in the extent to which the two languages are activated according to the context, particularly that of interlocutor/s. He represents the language mode continuum as a horizontal axis ranging from monolingual mode on the left to bilingual mode on the right (see Figure 4). In simple terms, when a bilingual is speaking to a monolingual who speaks one of their languages, language A, but not language B, they are positioned near the left – or monolingual end – of the continuum. When they are speaking to a bilingual who speaks both of their languages, A and B, they are positioned to the right – or bilingual end – of the continuum. He then adds a vertical axis on which the bilingual's languages (A, the base language in a hypothetical conversation, and B, the other language) are represented by squares situated above and below the



horizontal axis. The base language A is completely shaded, or black, as it is the more highly activated or principal processing language and the B language is shown activated to a lesser or greater degree, shaded accordingly. The B square will never be represented as white according to Grosjean, as he does not accept that that the bilingual can ever totally deactivate the other language (Grosjean 2008). He depicts with three vertical dotted lines three possible locations along the language mode continuum at which any bilingual might find themselves according to context: in these three intermediate positions the base language square A will always be black, while the less activated language B will be shaded lightly or more fully according to the level of activation. Intermediate modes arise, for example, when the bilingual knows their interlocutor has some knowledge of their second language but prefers not to speak it or is not very proficient and may shift from left to right or right to left as the bilingual detects the willingness of the interlocutor to use both languages, or the interlocutor's levels of proficiency in the second language. The bilingual may move along the continuum at any point, 'as soon as there is a need for it' (Grosjean 2010: 42). The same configuration is possible for the bilingual's B language, of course, if in another scenario, it becomes the principal processing language, in which case it is placed at the top of the figure as the new base language. Thus, the bilingual can change the base language and still remain at different positions on the language mode continuum. It is a constant that both languages are active but in most instances one language is more active than the other as it is the principal processing language.



*Figure 4: Grosjean's Language Mode Continuum (2008)*

Grosjean's investigation of the language modes of interpreters whilst they are carrying out simultaneous interpretation (Grosjean 2008: 62) is encapsulated in his Interpreting Model, linking theoretical investigation of bilingualism and interpreting. He posits where and how a simultaneous interpreter in action might be placed on the language mode continuum. First, the nature of the SI task will force the interpreter to be in bilingual language mode as he will need to listen in one language, the source language A, and speak at the same time in the other language, language B, the target language. The dotted line representing the interpreter's position is therefore placed very close to the right-hand side of the language continuum. For the interpreting task, both languages are activated to the same degree as both are needed to the same extent. This is a specific SI mode situation peculiar to the task in hand. This in turn is represented by the black

squares for the source language A above the horizontal axis and the target language B below it. Secondly, apart from the state of activation of the two languages, there is an inevitable variation in the activation of the interpreter's input and output mechanisms as he listens to and processes from the source (and sometimes the target) language and produces in the target language alone. The input and output mechanisms are represented by circles appended to the black squares above and below the horizontal axis and are shaded to indicate their level of activation. Thus, the input for language A, the source language, will be black, fully activated, and the output will be white, as nothing is produced in the source language. The input for target language B will be black and the output also black, as both are activated. Grosjean (2008) gives three explanations for the input circle being black: interpreters must be able to monitor their own overt speech, clients occasionally use the target language and thirdly a fellow-interpreter's cues must be heard. Grosjean's (2008) Language Mode Continuum and Interpreting Model provide part of the theoretical framework for this research and have shaped decisions regarding the study's methodology, through the choice of a SI task which ensures that participants' bilingual mode is activated.

## **2.10 Conclusion**

This chapter has addressed definitions of bilingualism. It has stressed the importance of individual bilingual profiles and considered whether this may be a more important factor in gauging advantage than AoA. It has reviewed further factors such as usage, balance, dominance and proficiency which have a major bearing on the individual bilingual profile and considered issues of memory modelling, language storage, access and retrieval. It has emphasised the centrality of Grosjean's theories on both language use and language mode and it has outlined how language mode, as defined by Grosjean, is a useful mechanism for establishing the context in which the bilingual must manage their two languages. Finally, it has outlined Grosjean's Interpreting Model, which clearly demonstrates how SI requires a unique language management system. The following chapter will examine Simultaneous Interpreting research, interpreting modes and language combinations, the main interpreting paradigms, directionality in SI and SI models.



# Chapter 3: Simultaneous Interpreting

## 3.1 Introduction

This chapter will situate simultaneous interpreting (SI) within the wider interpreting research context, presenting the challenges it poses in terms of the executive functions it requires. First, it will define what SI entails. Secondly, it will explore interpreting modes and language combinations. Thirdly, two of the main interpreting paradigms – the interpretive theory (IT) (Pöchhacker 2004: 68) and the cognitive processing theory (CP) (Pöchhacker 2004: 73) – will be discussed. Throughout, ‘process’ and ‘product’ in SI activity will be foregrounded, with emphasis on the immediacy and performance aspects of SI. The chapter will then review the current debate on directionality, which emerges both theoretically and on the ground in interpreter training, and which contextualises the choice of the bi-directional SI task in this doctoral research. Finally, attempts to model the complexities of the SI processing will be discussed.

## 3.2 Interpreting Definitions

Since World War II, interpreters have become an indispensable part of modern global communications. They owe their professional status in society to globalisation, the subsequent demand for international dialogue and the accompanying rise of available tailored technology. The Nuremberg Trials in the 1940s, and later the Tokyo War Crimes Tribunal, necessitating for the first time SI speeches in four languages, are widely credited as being the birthplace of professional modern-day conference interpreting, which has since developed into a world-wide phenomenon, encompassing the range of human pursuits from international diplomacy to commercial, social, medical, legal and academic intercourse. Interpreters provide a service to the global community in two senses: they are, on the one hand, paid language service providers but they are also entrusted with the task of facilitating oral communication between two language groups or individuals which could not otherwise take place (Pöchhacker 2004).

The common or dictionary perception of interpreting tends towards emphasising the aspect of orality and defines it accordingly as ‘oral translation’ (Pöchhacker and Schlesinger 2002: 1, 3) and ‘oral versus written translation’ (Baker 2011: 244) but it is recognised that this excludes sign languages and current academic definitions therefore opt to underscore immediacy rather than orality (Pöchhacker 2016). Half a century ago, Kade (1968, cited in Pöchhacker 2016: 10-11) had already defined interpreting as ‘a form of translating in which the source-language text is presented only once and thus cannot be reviewed or replayed, and the target-language text is produced under time pressure, with little chance for correction and revision’. Stress associated with speed and ‘one-offness’ is therefore highlighted as one of the two macro burdens on the interpreter. Pöchhacker (*Ibid.*: 11) prefers to replace the word ‘text’ by ‘utterance’ and updates the definition to ‘a form of translation in which a first and final rendition in another language is produced on the basis of a one-time presentation of an utterance in a source language’. The second macro burden on the interpreter is faithfulness to the original or semantic equivalence – ‘sameness of meaning’ (*Ibid.*: 12). Pöchhacker concedes that the conceptual framework above brings with it all the dilemmas associated with the definition of translation itself particularly in the ‘assumption of “similarity” in “meaning” or “effect”’ (*Ibid.*: 13), but nevertheless considers that it affords sufficient grounds on which to establish what interpreting is without having to ‘reinvent the wheel of Translation’ (*Ibid.*: 12). In this context, he further defines simultaneous interpreting as ‘spoken language interpreting with the use of simultaneous interpreting equipment in a sound-proof booth’ (*Ibid.*: 20). Russell (2005) views interpreting in general as ‘a highly complex discourse interchange, where language perception, comprehension, translation and production operations are carried out virtually in parallel’ (*Ibid.*: 1) and for SI adds ‘under severe time pressure’ (*Ibid.*: 1). For Setton (1999: 141), SI ‘is widely viewed as a particularly impressive form of rapid, instant translation’ (*Ibid.*: 1), yielding invaluable data for language communication studies where it differs from everyday dialogue, by affording the opportunity to analyse the ‘external pacing’ (*Ibid.*: 2) of comprehension and production, the immediacy of the process and the unusual phenomenon of retaining the message while changing the language. The emphasis in SI research to date falls either within this theoretical analysis of the unseen and therefore largely inaccessible processes taking place within the mind

of the interpreter, which demands cooperation with disciplines such as psycholinguistics or neurolinguistics, for example, or within the sphere of interpreter training, which looks to improve interpreter production skills. No work specifically addresses experimentally the question of the role of AoA in affecting SI production outcomes.

### **3.3 Interpreting Modes and Language Combinations**

Interpreting is broken down into several modes: SI, consecutive, chuchotage, relay, public service or liaison interpreting and sign language. The cognitive demands are not the same for each mode: consecutive interpreting requires particular memory skills, whereas rapid processing of information is a difficulty in SI (Christoffels and De Groot 2004). The cognitive difficulties associated with SI mean that interpreter training courses usually build up towards teaching it last (e.g. Gillies 2013). It takes place in a specific, technological setting, in a soundproof booth during international conference proceedings. The speaker on the floor delivers the speech into a microphone while the interpreter listens through a headset. While listening, the interpreter renders the message simultaneously into the target language and those delegates who do not speak the language being used on the floor listen through headsets. The interpreter must process the input in one language and render the message continuously in another. There is often a time-lag of a few seconds (also known as *décalage* or Ear Voice Span) while the interpreter waits for a unit of meaning before speaking (Pöchhacker 2004). As the interpreter must listen, speak, analyse what is being said and listen to their own output for errors, sustained concentration is required. Consequently, to avoid the risk of mental fatigue, the interpreter is paired with at least one colleague and each normally works for 20 to 30 minutes before switching.

In addition to speaking their first language proficiently, professional interpreters are required to be proficient in at least one other language and, more commonly, several. Languages spoken with a high degree of proficiency are known as active languages, whereas languages which are understood perfectly but spoken with less proficiency are referred to as passive languages. Unlike the L1/ L2 distinction preferred by bilingual research, interpreters' working languages are known as A, B and C languages. A and B languages are considered active and C languages are considered passive. The A language is the interpreter's L1. Two

L1s (A-A) are rare, although possible. As has been seen in Chapter 2 (2.5 and 2.6), most simultaneous bilinguals will in fact display dominance, however slight, in one of their languages. The B language is the language other than the interpreter's native tongue in which they are fluent. In SI, the interpreter has traditionally interpreted into their A language from their other working languages - B and C - and is comfortable interpreting from these languages even in complex discussions. Interpreters who work into their B language are said to 'work a retour' or to interpret bi-directionally. Although less common, a number of interpreters also work from all their languages into a second active language. This is known as having a 'second full booth'. A small number of interpreters have more than two active languages. Finally, C – or passive – languages are those languages of which the interpreter has a perfect understanding and which they work from, but not into.

### **3.4 Bilinguals and Translation/Interpreting**

Research findings have been divided as to the relationship between bilingualism and interpreting/translation (the latter in its generic sense) even at a very basic level. On one hand, the concept of "natural translation" has been around since the 1970s but 'the translating done in everyday circumstances by people who have had no special training for it' (Harris and Sherwood 1978: 155) has been taking place across the ages. Harris, a translologist, posited that all bilinguals can translate at some level and that 'translating is coexistent with bilingualism' (*Ibid.*: 155.) Schleiermacher (1813: 227) considers translation 'a merely mechanical task that can be performed by anyone with a modest proficiency in both languages'. Toury's (1995) concept of a native translator also implies that bilinguals have a natural predisposition towards translating. These views embody the prevalent assumption for many years that interpreters are "born, not made" (Baigorri-Jalón 2014; Lonsdale 1996).

Many bilinguals, however, may struggle with translation, for the reasons given in Chapter 2 (2.3), principally acquisition by domain as accounted for by Grosjean's (2008) Complementarity Principle Model. In Chapter 2, it was also seen that bilinguals are classified and researched principally through the lens of balance, dominance and proficiency, on the one hand, and distinguished from monolinguals by their ability to shift mental sets by language-switching in choice of language mode on the other. However, in interpreting, something



further is demanded from the bilingual. Macnamara (1967) and Lambert *et al.* (1959) reported no correlation between the bilingual proficiency of participants and the speed at which they were found to translate lists of words. Paradis (1979) argues that the process involved in translation is quite different from the process underlying speaking. He discusses cases of aphasic patients who had difficulties speaking one of their languages because of brain injury but who were nonetheless capable of translating into that language when spoken to in the other. Echoing Grosjean (2008), Paradis (1980) points to the fact that it is uncommon for bilinguals to acquire their second language by learning translation equivalents, which means they may not be equipped with the vocabulary required to interpret and are likely to have problems with production. Baker (2011: 111) concurs: ‘bilinguals are not good necessarily good interpreters. Interpretation assumes an identical vocabulary in both languages. [...] [A]n identical lexicon may not be present. Also, proficiency in two or more languages is not enough’.

Similarly, for Seleskovitch (1998), language proficiency alone does not suffice to make a good interpreter: it is the vehicle through which interpreting can take place, allowing the interpreter to understand what is being said but ‘Most often, the interpreter manages to meet the challenge because of his talent and mastery of technique’ (Seleskovitch 1998: 9). Seleskovitch does not elaborate on exactly what this talent is but the implication is that it is innate since she goes on to state that technique is something interpreters develop over time and through training and must not be confused with the ‘innate knowledge of a language’ (Seleskovitch 1998: 69). According to Gile (1995a), formal training is what allows interpreters to ‘enhance their performance to the full realization of their potential’ (*Ibid.*: 3). Once more, however, he does not elaborate on where this potential may originate. Longley (1968: 51) agrees that language ability is not synonymous with the ability to interpret but that it can be honed by training: ‘the possession of ten fingers no more makes a concert pianist than the knowledge of several languages makes an interpreter’. Kopczyński (1980: 24) detects the need for a ‘special psychological predisposition’ and Jones (1998: 72) considers SI ‘an unnatural activity [...] to be cultivated’. Gile (1995a) points to the fact that some written translators, despite having the same command of a language as an interpreter, are unable to interpret simultaneously. Gillies (2013) and Weber

(1989) look at interpreting from a slightly different perspective, that of the trainer, and conclude that: ‘Interpreting, despite the fact that it is often taught at universities, is not an academic subject; it is far more akin to a craft or sport [...] Interpreting is a skill or, to be more exact, a combination of skills that one can explain and understand quite quickly, but which take far longer to master in practice’ Gillies (2013: 3); ‘Conferencing interpreting is mainly a skill, very much like one of the more difficult sports’ (Weber 1989: 162). In sum, if interpreting requires a particular ‘flair’ and can be honed with practice, it is not certain that either the simultaneous or the sequential bilingual can automatically interpret. Nor is it certain that one group will have an inherent advantage over the other.

### **3.5 Interpretive Theory (IT) and Cognitive Processing Theory (CP)**

Two different perspectives have emerged in SI research: the theoretical, within a growing body of work which examines the complex underlying processes at work in the mind of the individual interpreter engaged in the task itself; and the practical, within the pedagogical field, where it is approached as a skill in which bilinguals are to be specifically trained. This section will examine what it is, in Grosjean’s terminology, that the ‘interpreter bilingual’ (Grosjean 1997: 168) must do which the ‘regular bilingual’ (*Ibid.*: 168), whether simultaneous or sequential, is not normally required to do.

Empirical publications on interpreting began in the 1930s with the first research contribution by Jesús Sanz (1930), a Spanish psychologist who explored issues such as stress, interpreter skill and cognitive processes. Two pioneering practical texts were published in the 1950s: Jean Herbert’s *Manuel de l’interprète* (1952), the first pedagogical handbook of its kind, and Jean François Rozan’s *La prise de notes en consécutive* (1956), a guide to note-taking principles which is still used today. These two bodies of literature on interpreting continue to be published today: a growing corpus of empirical research, along with practical handbooks for the interpreter and interpreter trainer. These two types of literature have increasingly interacted and influenced each other, with interpreter feedback - often negative - reflected in research, and research findings incorporated into pedagogical material.

Paneth was the first interpreter to combine theory and practice by gathering data from both interpreting schools and practising interpreters. She documented clearly and significantly by diagram for the first time exactly what is entailed in the simultaneity of SI: the reproduction in another language, not of what the interpreter hears, but ‘what he has heard’ (Paneth 1957: 32). The interpreter begins listening to Part A and starts interpreting Part A while simultaneously listening to Part B, the following group of words, which he will in turn interpret while listening to the beginning of Part C. It is this overlap which produces the simultaneity in SI: listening to what is coming next while interpreting what has come before. The SI process is therefore radically different from the speaking process. This is the challenge directly posed by this research to both groups of bilinguals, neither of which has been trained in SI. Chang and Schallert (2007) contrast everyday bilingual conversations, where dialogue is alternate, with SI, where comprehension and production run concurrently. ‘Regular’ bilinguals can choose to express their own thoughts in either of their languages in their own time and in their own way. The bilingual inhibits or de-activates one language and deploys the other as has been discussed in the previous chapter with reference to monolingual and bilingual mode (Grosjean 2008). By contrast, the ‘interpreter’ bilingual is required to listen to the live utterance of a speaker in one of his or her languages and simultaneously, in the way described above, render it in the other language, multiplying the mechanisms of language use and control significantly.

Paneth (1957) identified at this early stage many of the other main issues taken up by later researchers: the theory that interpretation is phrase by phrase, not simply word by word (later known as ‘chunking’) anticipation of clichés or grammatical constructions, restructuring of the original as the only means in certain circumstances of conveying the corresponding message, and the effect of acceleration in delivery by the speaker. She noted the stress the job entails in interpreters’ demand to smoke to steady their nerves. Lastly, she identified how the interpreter self-monitors: ‘He seems to be more conscious of his speaking than of his listening, as in good and fluent performances corrections of clichés or slips [...] are frequently heard’ (*Ibid.*: 36). In sum, she clarifies the issue of simultaneity and notes the importance of equivalence/fidelity, real-time activity and stress, all factors which, along with others, such as chunking, form the

components to be juggled in what has come to be known as cognitive load management. Williams (1995) also explicitly identifies this multi-modality mechanism, contrasting it with the dual mechanisms usually associated with bilinguals in either monolingual or bilingual mode and considers that the extra inhibition and deployment efforts required by the complex process of SI suggest a ‘higher level of modality control’ (*Ibid.*: 147) which is what essentially ‘distinguishes interpreters from bilinguals’ (*Ibid.*: 147).

The phenomena identified by Paneth have been researched in great detail over the following decades as interpreters and, increasingly, psychologists, followed by psycholinguists, sociolinguists and neurolinguists, turned their attention to studying them within their own disciplines. Bridging the gap between practising interpreters and growing scholarship, with degrees in both interpreting and psychology, Kurz (née Pinter) (1969), compared novice, advanced and highly proficient interpreters with the aim of investigating the role of practice in improving the skill of listening and speaking simultaneously. In the early 1970s, UK clinical psychology practitioner, Gerver, applied his general interest in human information processing to the specific process of SI. His Ph.D. thesis (1971) elucidated how detailed elements of cognitive load, for example, split attention, the impact of accelerated input speed, noise and non-standard intonation impacted on conference interpreters. Much of Gerver’s research has provided the foundations for later work on concepts such as working memory, pauses, self-monitoring and presentation speed. Unaware of Gerver’s work, Barik, a French-born Canadian, (1969) examined time lag in his doctoral thesis. In a subsequent article, he investigated interpreter ‘content departures’ (Barik 1975: 78) such as omissions, additions and substitutions and concluded that much work needed to be done on the issues of the ‘translation unit’ and the ‘correspondence between original and translated versions’ (*Ibid.*: 90). Barik did not hesitate to use untrained bilinguals in his investigation: he used two experienced conference interpreters, two trainee interpreters with recent post-graduate qualifications and two ‘amateurs’ - ‘thoroughly fluent bilinguals active in the area of language but with no experience in interpretation’ (Barik 1975: 79).

As interpreter training became increasingly formalised, Seleskovitch, a distinguished interpreter, interpreter trainer and interpreting researcher,

established the doctoral research programme at the *École Supérieure d'Interprètes et de Traducteurs* (ESIT) in Paris in 1974. It is accepted that ESIT's *Traductologie* (Translation and Interpreting Studies) programme went a long way towards the creation of Interpreting Studies as a separate field of research and represented a cornerstone in the advancement of interpreting research (Pöchhacker and Schlesinger 2002). Seleskovitch co-founded AIIC (The International Association of Conference Interpreters) which remains highly influential in the SI sphere. Pöchhacker identifies the work of Seleskovitch and her group, which enunciated the interpretative theory of Translation, or IT, as the first theoretical paradigm of interpreting studies. Among Seleskovitch's contributions to the field was the *théorie du sens* (theory of sense). For translation or interpretation to succeed, she postulated that there cannot simply be a verbatim reproduction of words in the target language. In addition to rejecting the contrastive linguistic theories which came before, she maintained that 'virtually all words are untranslatable' (Seleskovitch 1978: 85) and 'what the interpreter says is, in principle, independent of the source language' (*Ibid.*: 98).

According to the IT paradigm, SI is conceived as 'speech-thought-speech' (Seleskovitch 1998: 38). The simultaneous interpreter should see beyond wording and meaning and ensure all the connotations in the original language are present in the target language. SI goes through three stages: perception, comprehension and expression (later more commonly referred to as production) and the output should reflect the meaning in the source language and echo any nuances in the speech. The overall objective is for those listening indirectly to understand exactly the same message – but not necessarily word for word - as those listening directly. The underlying process is therefore based on deverbalization (*Ibid.*).

The 1970s set the scene for significant change towards a more rigorous scientific approach in the field of interpreting research. Previous methodological tools were rejected and a new breed of researcher emerged. The call for more scientific testing drawing on other disciplines was answered in 1986 when the University of Trieste organised an interpreter training conference, the first forum for practitioners to discuss and critique existing principles and concepts. There was a drive for practitioners to undertake research and many did. Gile (2000) refers

to more than a decade of research dominated by interpreter/researchers themselves. Nonetheless, the lack of quantitative, experimental and empirical foundations meant that the voices of those championing different, often interdisciplinary, paradigms were not yet heard (Gile 2006). The reorientation and diversification of the 1980s set the scene for the genesis of independent Interpreting Studies. Until this point, interpreting research had mostly been discussed at translation and linguistics conferences. Gile made the first reference to the new discipline of Interpreting Studies in 1992 and called upon researchers not to be closed to the possibility of working with other disciplines. However, the result was what he termed ‘doorstep interdisciplinarity’ (Gile 1999: 41). He relates problems collecting authentic and experimental data, finding common ground with scholars in other disciplines, ecological validity and with interpreters themselves who were still reluctant to be research subjects (Pöchhacker 2004).

Gile is considered to be ‘the most prolific and influential author’ (Pöchhacker and Schlesinger 2002: 162) in interpreting scholarship. Rooting his work in Gerver’s early cognitive psychology approach, Gile demonstrates most clearly Pöchhacker’s second Interpreting Studies paradigm, the ‘Cognitive Processing’ (CP) paradigm (Pöchhacker 2004: 73). Gile (1995a) considers that the level of cognitive difficulty involved in both SI and consecutive interpreting, which naturally leads to errors and omissions in output, is a multiple-task problem which needs a practical solution. It is precisely this multiple-task problem which the ‘regular’ bilingual who has no experience of SI will have to tackle. Gile (*Ibid.*) conceptualised the taxing cognitive processing mechanisms in a set of Effort Models, intended to define these as clearly and simply as possible and thus provide coping methods for interpreters to improve their output. He first outlines three Effort Models: the Listening and Analysis or Comprehension Effort (L), the Production Effort (P) and the short-term Memory Effort (M). The first encompasses ‘comprehension-oriented operations, from the analysis of the sound waves carrying the source-language speech which reach the interpreter’s ears through the identification of words to the final decisions about the ‘meaning’ of the utterance’ (*Ibid.*: 162). The second is the formulation and delivery of the target language speech and the third is viewed ‘as a storage mechanism where information is temporarily kept before further processing

takes place' (Liu 2008: 173). Each of these Efforts takes up the interpreter's necessarily limited mental energy and must not in total exceed their processing or co-ordination capacity (C) which can be seen as an 'air-traffic controller for the interpreting that takes place, allowing the interpreter to manage her focus of attention between the listening and analysis task, the production task and the ongoing self-monitoring that occurs during performance' (Leeson, 2005: 57). Thus, in its simplest form Gile's equation looks like this:

$$(L + P + M) < C$$

The total requirements (TR) for any SI task can then be represented as a sum of all the individual requirements (but not necessarily an arithmetic sum, as some resources may overlap):

$$TR = LR + MR + PR + CR$$

The basic premise of the model is that interpreting will only be successful if the interpreter's processing capacity exceeds the total requirement of the three Efforts and the Coordination Effort. Total available capacity (TA) must exceed total requirements (TR) for the interpreter to produce a smooth performance of the target speech. The co-ordination capacity requirement is a phenomenon new to 'regular' bilinguals, who will not previously have been called upon to manage their two languages in exactly this way before.

As the capacity requirements for L, M and P vary at each point in time, since each deals with processing variables such as background noise, ease of comprehension, familiarity with the topic, segmentation, speed, accent and difficulty of speech, CR can also fluctuate dramatically. When there is insufficient processing capacity to perform a task, saturation occurs and output weakens. Attention to managing this and maintaining a balance with each successive phrase interpreted is therefore vital. The interpreter must allocate the requisite amount of processing capacity to each of the Efforts or performance deterioration will take place. Gile (1995a: 190) attributed most of the errors to:

- a) triggers which 'increase processing capacity requirements', i.e. fast speeches and different accents and

b) ‘short speech segments lacking redundancy’, i.e. numbers and proper names.

Speed of delivery, unfamiliar accent in the input language and the need to process essential information in less easily assimilable form, therefore, all present previously unknown challenges. Interpreters often walk a thin line in terms of saturation and capacity overload and an inability to manage capacity can result in weaknesses such as omissions and errors (*Ibid.*). Walking this thin line will again pose major difficulties for the ‘regular’ bilingual in this research task.

In order to counter these interpreting difficulties, Gile (1995b) devised a set of coping mechanisms or strategies to control cognitive load. These strategies fall into three categories: comprehension (e.g. delay the response/reconstruct), prevention (e.g. change Ear-Voice Span/segment) and reformulation (e.g. explain or paraphrase/transcode - convert [language or information] from one form of coded representation to another). Further, the choice of strategy is governed by five rules: maximising information recovery, minimising recovery interference, maximising the communication impact of the speech, the law of least effort and self-protection (Gile 1995a). ‘Regular’ bilinguals are expected to find their own rapid solutions while continuing to deliver their output in the target language as fluently as possible.

To summarise this section, the implication for ‘interpreting bilinguals’ is that the executive functions required for the performance of the SI task are quite different from and more demanding and more complex than the ‘regular’ managing, switching, inhibiting and activating processes with which they are familiar in their everyday use of their two languages. An additional element of the interpreting task devised for this research is that the bilingual will be asked to perform it bi-directionally from and into each of his or her languages separately.

### **3.6 Directionality**

Bi-directional SI has been a matter of contention in Interpreting Studies for some time and ‘the implications of A-to-B interpreting have yet to be addressed more fully’ (Pöchhacker 2004: 100). Seleskovitch (1978) stated that the output from interpreters working into their native/A language is superior to that of those



working into their non-native/B language. She believed that the latter lack ‘the deeply-rooted intuition for the language, the natural ease of expression necessary to restructure the form’ (*Ibid.*: 120). Chang and Schallert (2007) see this as a production issue, where ‘interpreters are at a cognitive disadvantage when interpreting from their A, due to the extra effort required to find corresponding expressions in their B language’ (*Ibid.*: 138). Seleskovitch’s (1978) traditional or Western model, has predominated in both academic research and training research due to the influence of AIIC and therefore most professional associations and translation agencies adhere to her ‘golden rule’ (Pavlović 2007: 82). In the Eastern European Model and in China, however, interpreting has been carried on in both directions for considerable time (Gile 2005). Page (2005) points out that the traditional position is now being challenged on several fronts. Pavlović (2007) notes that an increase in interpreting outside the institutional frameworks has meant in practice greater frequency in bi-directionality and that this along with the situation regarding ‘minor’ languages, where there may be no option but for interpreters to interpret in both directions, has made for a justified re-questioning of the traditional position. She also notes that the globalisation of English has led to near-native levels of mastery in it as a B language and that attrition of A languages in interpreters who have lived outside their native countries for extended periods has further contributed to erosion in A and B language distinctions. Here she concurs with Pedersen (2000) that ‘first language’ (*Ibid.*: 109) may not imply the first language learnt by the bilingual and echoes Grosjean’s five changes of L1 (2010: 86-88) and Skutnabb-Kangas’ (1981) position that ‘the language one uses most may be a different one at different stages in one’s life...[the] mother tongue may change, even several times during a lifetime’ (*Ibid.*: 18). The unique profile of each individual bilingual, pinpointed in Chapter 2 (2.3) has, therefore, implications relevant to the issue of directionality in SI.

Current discussions have centred on the issue of cultural – as opposed to language – competence (Seel 2005). Seel (2005) argues that, since interpreters are more likely to be more culturally competent in their native culture, they may be more competent interpreting out of their A language as they understand it better. Martin (2005) agrees that comprehension of the source language must be prioritised over production in the target language. Fernández (2005) highlights

that certain cognitive processes on which interpreting depends are harnessed more easily in the A language and that reduced cognitive processes in the B language reduce the interpreter's options in production and therefore, paradoxically, speed it up. More specifically, in bilingualism terms, a richer L1 lexicon may afford the interpreter greater choice of synonym or wider semantic equivalence 'triggered by the wider range of nuances at his/her disposal in L1' (Williams 1995: 151) and therefore interpreters may expend more time, where time is of the essence, in making their lexical decision in the B-to-A direction.

Gile (2005) notes that many who reject A-to-B interpreting in SI accept it as natural in consecutive interpreting without seeing the illogicality of their argument. He (2005: 9) sums up the current situation by stressing that much work remains to be done in this area since 'interpreting directionality preferences are contradictory and based on traditions rather than research [...]. [D]irectionality doctrines, no matter how strongly proclaimed, do not have a uniformly solid foundation'. Although institutions such as the European Union, the United Nations and AIIC align themselves with Seleskovitch and interpreters mostly work into their mother tongue, the realities of the private market often dictate that interpreters perform a *retour*. Providing an interpreting service is expensive and costs can be reduced by asking private sector interpreters to work bi-directionally. Additionally, interpreters for new EU accession countries with minority languages as an L1 now must work into their B language. In this, Gile echoes Williams' (1995) argument that directionality policy has been dictated by established custom rather than rigorous testing. The justification for B-to-A interpreting rests on the fact that the L1 tends to be stronger and stress can impact the output so it is safer to interpret into the L1. Nevertheless, there has been little focus on the effect of stress on comprehension and perception. Understanding the message in interpreting is imperative: a message which has been understood can be interpreted, whereas one that has not been understood cannot be interpreted (*Ibid.*). Williams (*Ibid.*) underlines the need for further research on the elements involved in bi-directional interpreting and concludes that, while stressful conditions can lead to instances of 'temporary regression' (*Ibid.*: 151) even in highly proficient L2 speakers, in general L1 to L2, that is, A-to-B, interpreting results in a 'higher degree of adequacy, i.e. fidelity to the source text' whereas L2 to L1/B-to-A interpreting produces a 'higher degree of

acceptability, i.e. conformity to the standard language' (*Ibid.*: 150-151). Either way, the cognitive processes are taxed, though differently. Chang and Schallert (2007) link the directionality issue to Gile's Effort Model and remind us that SI is the result of a coming together of the four efforts. Consequently, a problem in any one of the effort areas can have an impact on the others. It is important when evaluating interpreting, therefore, to take into account the role of production versus comprehension in the process, the ability for L2 productive and receptive skills to withstand stress and the way in which all of these elements interact during the process of interpreting (Chang and Schallert 2007). They conclude from their study of professional Chinese/English interpreters that 'as the comprehension and production activities in SI interact closely, the A-language advantage and B-language disadvantage often cancel each other out' (*Ibid.*: 167). By setting a bi-directional SI task, this research hopes to shed new light on bi-directionality by analysing the quantitative results produced by participants' performances in both tasks and especially through the Think-Aloud Protocols.

### **3.7 SI Models**

Research in psycholinguistics and neurolinguistics has produced complex SI models, from Gerver's (1971) first flow-chart model of information processing, through Massaro's (1975) speech comprehension model to Chernov's (1978) probability prediction model, which highlighted the idea of anticipating speeches in order to reduce difficulty levels. Kirchhoff's (1976) psycholinguistic communication model particularly addressed cognitive load and Setton (1999) contributed significantly with his cognitive-pragmatic analysis by attempting to synthesise previous models and give an integrated view of the SI activity in the broadest social and contextual situations. None, however, is an easily assimilable model which illustrates succinctly the SI "process": how what the speaker says in the source language is transformed by the mental processes of the interpreter into the product for the listener in the target language. Neither has agreement been reached on how to measure successful cognitive load management (Seeber 2013).

A recent between-group study on trained/untrained/practised/unpractised bilingual/interpreter participants carried out by Babcock and Vallesi (2015) measured task-switching costs in SI in order to explore the language control

issue, and specifically inhibition issues, that SI raises. They found it possible only to draw tentative conclusions. Noting that, whereas in most contexts (the ‘regular bilingual’ (Grosjean 1997: 168) situation), inhibition can account for how bilinguals control the use of their two languages, the inhibition model falls short when the more demanding conditions of SI have to be met. Babcock and Vallesi (2015) conclude that inhibition *is* at work in SI, but in more complex ways which indicate that each language may be controlled by a distinct mechanism, influenced by multiple factors, as called for uniquely in the process and production stages of SI task.

Precisely because SI is such a complex activity, many trainers advocate rather for it to be broken down into its constituent parts ‘to tease these ongoing activities apart, differentiate the component skills and, where possible, provide training experiences in each one’ (Lambert 1992: 265). Christoffels and de Groot (Christoffels and De Groot 2005: 454-62) provide a useful compilation of the components of the SI activity which make for a clear understanding of what it involves for the participants:

- **Split conceptual attention:** between understanding the input while producing the output
- **Décalage:** finding a time balance between waiting for full meaning and losing memory storage of the input
- **The interpreting unit or ‘chunk’:** this is usually at clause level but the interpreter’s segmentation may not mirror exactly the speaker’s input segmentation
- **Language control:** ‘unanswered questions remain’ (Christoffels and De Groot 2005: 459) as to how activation and inhibition function
- **Language recoding:** it is not clear whether a conceptual or verbal strategy or a mixture of both is used but ‘complete deverbalisation seems unlikely’ (Christoffels and De Groot 2005: 461). Some retention of the form of the original words must occur
- **Self-monitoring:** ‘three speech streams in two languages reside simultaneously in the language system: the comprehension of input, the production of output, and the monitoring of output [...] How these three speech streams can all cooccur at the same time and how they are kept

separate from one another are questions that still have to be resolved' (Christoffels and De Groot 2005: 462)

- **Memory processes:** three memory issues are noted: short-term memory of input material, short-term storage of input while output is being produced and long-term memory needed for choice of linguistic elements and retrieval of past knowledge of topic
- **Sustained heavy mental load:** this induces measurable physiological stress documented in increased heart rate and dilated pupils. (Increasing the 30-minute span of booth sittings increased carelessness).

Gillies (2013) proposes a similar isolation and activation of the individual components in SI as a means of making the task more manageable for those being trained as simultaneous interpreters. He suggests tackling the following skills individually: delivery, split attention, *décalage*, anticipation, reformulation, self-monitoring and stress management (Gillies 2013: 195). He specifically highlights anticipation and prediction as key ways of managing cognitive overload and reducing stress and in this he is echoed by Pöchhacker (2004).

It is clear from Christoffels and de Groot's (2005) conclusions that research on SI has still not fully defined the complex SI activity. However, the components of the activity are in general now largely agreed upon by both theorists and practical trainers and as such constitute an acceptable 'table of contents' comprising the cognitive processes specifically required by the SI task. There appears to be no evidence to suggest that there is anything intrinsic to the SI task which would enable a simultaneous bilingual to perform it better than a sequential bilingual. Considerations other than AoA may account for the ability to juggle all the necessary elements of the complex SI activity.

### **3.8 Conclusion**

This chapter has examined research in simultaneous interpretation and has considered the cognitive processing challenges posed by it to the 'regular' bilingual. It has presented interpreting modes and language combinations and the bearing the latter have on directionality. It has reviewed two of the main interpreting paradigms, interpretive theory (IT) (Pöchhacker 2004: 68) and

cognitive processing theory (CP) (Pöchhacker 2004: 73) and the current debate on directionality. Finally, it has examined the models which deal with the complexities of SI. The next chapter will present the mixed methods research design used in this project.



# Chapter 4: Research Methodology

## 4.1 Introduction

This chapter presents the research methodology employed in this project. I adopted a mixed-methods approach with three data collection instruments: a questionnaire, an experimental simultaneous interpretation task and Think-Aloud Protocols. The chapter shows how piloting the questionnaire and the SI tasks led to the incorporation of the Think-Aloud Protocols. In the first section, I restate the principal research question and describe two further research questions. I then review the design of the mixed-methods approach, outline the piloting phase and present the data collection and data preparation procedures and their implementation. These two sections prepare the way for the quantitative findings documented in Chapter 5. The final section describes the coding steps involved in analysing the data from the Think-Aloud Protocols ahead of the qualitative findings, which are presented in Chapter 6.

## 4.2 Research Questions

This research project sought to determine whether learning two languages from the earliest years of childhood (before age three) results in an advantage in the skill of simultaneous interpreting in untrained adult bilinguals, in other words whether there is an intra-bilingual advantage. Research Question 1, the overarching question posed by this study, asked: Do adult simultaneous bilinguals outperform adult sequential bilinguals in simulated experimental bi-directional simultaneous interpreting tasks? The research attempted to answer this question by designing two SI tasks - one into English and the other out of English - which were performed by 24 simultaneous and 24 sequential bilinguals, rated according to 15 criteria and assessed statistically.

Research Question 2 asked: In which categories do adult simultaneous bilinguals outperform adult sequential bilinguals (or vice versa)? Answering this question demanded a further statistical analysis of the tasks at category level, to distinguish more clearly between the results of the simultaneous and sequential bilinguals. An online questionnaire was drawn up to be completed by the participants prior to attending on the test day to gather background language



information and ascertain whether there were factors other than AoA which might throw further light on the participants' performances.

As the experimental design proceeded and the pilot phase began, it became apparent that the research design could capture the perceptions of participants before and after the SI task. A two-phase Think-Aloud Protocol was developed to allow them to contribute their perceptions of the task itself, their expectations and how they felt the tasks had gone. This led to the formulation of a third research question. Research Question 3 asked: Are there any differences in perceptions between the simultaneous and sequential bilinguals in terms of language storage, linguistic dominance and directionality?

As I have already noted in earlier chapters, no body of research has concluded that there is anything inherent in how either simultaneous or sequential bilinguals acquire their languages which might predispose them to having an intra-bilingual advantage in an interpreting task. As summarised in the previous chapter, much work has been carried out on bilingual children (Cummins 1981; Lenneberg 1967; Peal and Lambert 1962; Petitto et al. 2001; Valdés 2003) and some on young adults (Houtzager et al. 2017; Ibrahim et al. 2013; Prior and MacWhinney 2010a; Seçer 2016), ageing adults (Bialystok and Craik 2010; Bialystok, Craik, and Freedman 2007) and brain-injured adults (Filiputti et al. 2002; Paradis 1998; Ramamurthi and Chari 1993) but there has been almost no work among healthy adults. Almost all research on bilinguals has been carried out in comparison with monolinguals and therefore in only one of the bilingual's two languages (Grosjean 2008). It was also seen that some recent limited research has been conducted testing adult bilinguals in both their languages, but, once again, only against comparable monolinguals in first one language, followed by the other (*Ibid.*). Thus, language mode has been neglected. I hoped by sampling within a normal healthy adult bilingual population who have maintained active use of their two languages and by affording them the opportunity to maintain bilingual mode to make a contribution towards redressing these imbalances and bridging the age gap in research on adult bilinguals.

To my knowledge, there is only one study which has been conducted in SI research which is relevant to my particular project and which also links the design of the SI task with the available pool of bilingual participants. Dillinger

(1994) set out to compare the comprehension of the input language element only in inexperienced and experienced interpreters, with a view to answering the question of whether or not interpreting skills are innate or may be enhanced by experience and training. His findings, that the two groups of participants processed in the same way, with a slight quantitative advantage to the experienced interpreters, are interesting in themselves but it was his methodology and attitude to this type of SI research which encouraged me in the adaptation of the SI tasks. First, he advocates experimental research on SI, even if it is simulated. He himself had no conference setting and no audience and his participants, seated in a quiet room, could not see, but only hear, the speaker. Secondly, his model set an acceptable precedent to follow: his texts, although different from the more natural speech content I envisaged, in that they were specifically written by him to create speeches containing the specific linguistic properties which he later wished to analyse, lasted approximately four minutes and were preceded by a shorter warm-up text and followed by a short de-briefing session. Thirdly, he considers perfect random sampling to be impossible because of the geographical restrictions on the availability of possible participants, combined with their willingness to take part.

#### **4.3 Research Design and Data Collection Instruments**

This section will present the rationale for the design and administration of the study's research instruments. In order to answer the three research questions, a mixed-methods, cross-sectional approach was adopted. The project employed three data collection instruments:

1. An online bilingual Language Background Questionnaire
2. A simulated experimental bi-directional simultaneous interpreting (SI) task involving three stages: (a) warm-up task, (b) SI task into English, (c) SI task out of English
3. Pre- and post-task Think-Aloud Protocols.

Mixed-methods research 'involves different combinations of qualitative and quantitative research either at the data collection or at the analysis level' (Dörnyei 2007). It is deemed essential in order to 'uncover information and perspective, increase corroboration of the data and render less biased and more

accurate conclusions' (Reams and Twale 2008). Sandelowski (2003) provides two reasons for adopting a mixed-methods approach. The first is to approach an issue from various perspectives in order to understand it more fully and the second is to employ triangulation as a means of confirming the findings. The value of mixing methods lies in the fact that researchers can combine the best aspects and strengths of both qualitative and quantitative approaches which in turn allows them to analyse material on a number of different levels. Mixed-methods research also enhances validity by corroborating conclusions. As a result of these characteristics, mixed-methods findings become more accessible to a larger readership (Dörnyei 2007). Nevertheless, mixing methods is not without its pitfalls. The main criticism levelled at mixing methods is that researchers may not be sufficiently familiar with both qualitative and quantitative approaches: it is rare for researchers to be 'methodologically ambidextrous' (Dörnyei 2007: 46). A further downside is the sheer number of ways in which the methods can be combined, which points to the potential shortcoming of researchers not being principled in selecting combinations (Dörnyei 2007: 46).

One of the most common mixed-methods approaches involves combined use of the interview study and the questionnaire survey but it is not limited to this option (Dörnyei 2007: 173). Johnson and Christensen (2004; cited in Dörnyei 2007: 173) note that eliciting participants' views alongside experimental research findings can be beneficial. Further, Dörnyei (2007: 173) states that the addition of a qualitative element to an experiment may improve internal validity. As a result, I employed a mixed-methods experiment along with Think-Aloud Protocols (QUAN - Qual) and a background questionnaire (Dörnyei 2007: 171). The following table maps the research questions, research instruments and analysis employed in this project.

*Table 1: Research questions and corresponding research instruments and data analysis tools*

| Research Questions  | Research Instruments   | Analytical techniques  |
|---|--|--|
| 1. Do adult simultaneous bilinguals outperform adult sequential bilinguals in bi-directional SI tasks?  | <ul style="list-style-type: none"> <li>• SI tasks</li> </ul>                                       | Quantitative: inferential statistics<br>- Independent sample <i>t</i> -tests<br>- Mann-Whitney U tests |
| 2. In which categories do adult simultaneous bilinguals outperform adult sequential bilinguals (or vice versa)?   | <ul style="list-style-type: none"> <li>• SI tasks</li> </ul>                                       | Quantitative: inferential statistics<br>- Independent sample <i>t</i> -tests<br>- Mann-Whitney U tests |
| 3. Are there any differences in perceptions between the simultaneous and sequential bilinguals in terms of language storage, linguistic dominance and directionality? | <ul style="list-style-type: none"> <li>• Think-Aloud Protocols</li> <li>• Questionnaire</li> </ul> | Qualitative and quantitative:<br>- Content analysis<br>- Descriptive statistics                        |

In terms of the quantitative techniques, I used independent sample *t*-tests and Mann-Whitney U tests to analyse both the overall SI experimental task scores (Research Question 1) and the individual scores in each of the categories according to which participants were evaluated (Research Question 2). A mixed-methods approach was taken to Research Question 3: the Think-Aloud Protocols were analysed qualitatively using content analysis and the Language Background Questionnaire was analysed quantitatively using descriptive statistics.

#### **4.3.1 Bilingual Language Background Questionnaire**

Questionnaires are a popular research instrument in the Social Sciences, the purpose of which is to use information gathered from a smaller group (or sample) to characterise a wider population. It is possible for questionnaire data to be used both quantitatively and qualitatively and the main concerns with regard to administering them are how to sample the respondents and the design of the questionnaire (Dörnyei 2007). Their versatility draws researchers to use questionnaires as a research instrument: they gather vast amounts of information quickly and in a way that is easily accessible. According to Dörnyei (2007: 102),

there are three types of questionnaire: 1) factual, 2) behavioural and 3) attitudinal. This research project employed a questionnaire with both factual and behavioural components.

Much information has been gathered over the past half-century regarding how best to formulate questionnaire items. Nevertheless, 'item design is not a 100 per cent scientific activity because in order to write good items one also needs a certain amount of creativity and lots of common sense' (Dörnyei 2007: 108-9). As a result, there is no fail-safe method of preventing researchers falling into certain traps of questionnaire writing. Dörnyei (*Ibid.*) provides seven suggestions on how to compose clear and accessible questions: 1) aim for short and simple items, 2) use simple and natural language and 3) avoid ambiguous or loaded words and sentences, 4) avoid negative constructions 5) avoid double-barrelled questions, 6) avoid items that are likely to be answered the same way by everybody and 7) include both positively and negatively worded items.

The online Bilingual Language Questionnaire (see Appendix 1) contained 58 language questions grouped into several sections. Given the exploratory nature of this research project, the questionnaire items were designed to be as wide-ranging as possible in terms of language experiences. Participants were asked to read the instructions for each section and bear in mind that there were no 'right' or 'wrong' answers. The first section dealt with the number of languages spoken and the age of acquisition of these languages. It determined 1) the languages used in the home with different members of the family and care-givers and 2) asked if participants have had any interpreting experience. Next, the questionnaire addressed participants' language backgrounds, languages spoken and the degree of language exposure received in day-care, primary school and secondary school. The penultimate section was entitled 'Language proficiency, preference and use' and asked participants to rate their language proficiency and detail their current language preferences, exposure and usage. The final section requested participants' name (replaced by an alpha-numeric code), age bracket, gender, place of birth, current occupation and highest level of education.

Open-ended questions were posed in the first and last sections of the questionnaire as it was unlikely that respondents would have similar language acquisition histories and life stories. Closed-ended item types were used in the form of multiple-choice questions in the sections on past language use and

domains, language education, current language use, age, gender and level of education. Likert scales were used for some of the questions on current language use and semantic differential scales were also used in the language proficiency, preference and use section.

Dörnyei (2007: 112) proposes a five-step process for piloting a questionnaire: 1) drawing up an item pool, 2) initial piloting of the item pool, 3) final piloting, 4) item analysis and 5) post hoc item analysis. Consequently, I drew up more than enough questions for the Language Background Questionnaire and asked colleagues for feedback so as to eliminate some items. I then administered the questionnaire to my pilot group over a period of several weeks. I reviewed respondents' input and items were revised ahead of administering it to my assessed participants in order to make the questionnaire as clear and accessible as possible. The pilot participants completed the online Bilingual Language Questionnaire (see full text in Appendix 1) and gave feedback regarding the clarity of the questions posed. The wording of one question in particular confused the pilot participants so this was clarified in the final version. One participant indicated that she had undertaken a research Master's and this option was not available so I included it as an option in the question on level of education. Two commented that certain questions were difficult to answer as their unconventional personal background did not fit into the options provided and another two said they felt they could have benefitted from some additional space to complete their responses with added detail. As a result, I added a section at the end for participants to complete their answers in as much detail as they wished. All feedback was incorporated into the preparation of the final version of the questionnaire and some of the comments from the added section contributed to the descriptive statistics.

Regarding the data preparation phase for the Language Background Questionnaire, I sent participants the questionnaire via Survey Monkey and I received an email from Google Forms informing me when questionnaires had been completed. Contained in the email was a 'View summary' box, which, when clicked took me to the online questionnaire containing each of the participant's answers. Here, it is possible to view individual participant's answers or a summary of all of the answers to each of the questions combined. I clicked on the 'Download responses' option and this opened a zip file containing

a folder. This folder contained an Excel spreadsheet of all 48 sets of answers to the questionnaire items.

### **4.3.2 Adapting the Simultaneous Interpreting Task**

It is important to emphasise that the task that was chosen to test the participants in this research is an adaptation of SI activity. There was no intention of simulating real-life professional interpreting booth conditions at international conferences. Instead, the aim was to reflect the essence of the SI activity, ensuring that all the necessary components were reproduced. The task was then presented to the participants, who were all untrained bilinguals, in the way that best facilitated them carrying it out. Their performances were, however, evaluated according to recognised SI research parameters.

In terms of choice of mode of interpretation, it was felt that it would be best to expose participants to an interpreting task which they had never carried out before. Some participants had done some consecutive interpreting. SI is in fact the easiest of the interpretation modes to adapt, effectively requiring only a quiet environment, a speech presented by video, the presence of each participant in turn, headphones for the participant to wear, and a means of recording his output for later analysis. SI is my preferred interpreting mode, the one I am most enthusiastic about and have most experience in. I felt that approximating SI conditions would yield results and I felt I could reproduce acceptable SI conditions which would not be too daunting for the participants.

Opting for the SI mode also fulfilled the condition of interpreting at maximum processing capacity and at maximum memory demand, because of both the speed and simultaneity involved. With SI, the interpreter first listens and then begins speaking with a slight lag behind the speaker. While analysing and reformulating what has gone before, he listens to what is to follow. The immediacy of the process puts extra strain on the interpreter, who has no recourse to, or time for, making written notes. The speed with which the simultaneous interpreter must control the use of his two languages is a further constraining element. Paradis (2002) points out that simultaneous interpreters must be able to inhibit and activate each of the components involved in SI in order to prevent interference. It is precisely this state of activation/inhibition,

along with the simultaneity and real-time immediacy of SI, which was of interest to me. According to Paradis (2002), for each language and direction of translation, there are at least four systems, each neuro-functionally independent. It is for this reason that, in order for the systems to be used at the same time and incurring as little interference as possible, simultaneous interpreters must achieve a certain balance between activation and inhibition.

I wanted to take into consideration the fact that the mere thought of performing an SI task with no prior experience could result in anxiousness. Interpreting is stressful, as has been seen, even for experienced interpreters, so there was a possibility that participants could feel embarrassed or demoralised if unable to complete the interpreting tasks to their own satisfaction. In an attempt to minimise participant inconvenience, nervousness, anxiety and embarrassment the SI task was customised in terms of 1) location and equipment and 2) test material.

First, a location and equipment for the tests had to be found. Professional SI takes place in a booth but hiring SI booths and sound engineers to replicate actual SI settings is very costly. Having tried unsuccessfully for several months to find available booths for the project I was forced to abandon that approach and instead devise an adaptation of the SI activity using computer equipment which could be located for testing purposes in a quiet room in Trinity College Dublin. Participants would be invited to participate in the tests seated at a table in front of a computer. It was hoped that adapting the SI task in this way would ensure that participants would feel relaxed and not overwhelmed by the formality of a booth setting. In order to make this experience as realistic as possible, the speech would be screened on the computer monitor as a video recording, allowing the participant to observe the paralinguistic features of the speaker. Participants would listen to the audio via headphones and their interpretations would be recorded on a Dictaphone. The participants' performances would then be transcribed - and assessed - at a later date.

I planned to remain in the room while participants undertook the tasks. I would inform them that without their help I would not be able to understand what was being said as I did not have a headset. This simulated a 'true listener' situation: provision of a person who does not speak the language of the input speech and therefore genuinely requires the translation provided by the interpreter. It was



not possible to provide a true listener other than me due to the cost implications of having another person present for 48 hours of testing at times arranged to suit participants. I hoped that my presence would not be nerve-wracking but would encourage the participants to try harder to communicate the message.

Regarding test material, to my knowledge, no research has progressed to the level of a three-minute recorded text of a genuine speech, such as those used in this study. Most tests are carried out with fragments of language, divorcing language from its functional use as a meaningful piece of communication. Tests are regularly conducted outside of a genuine communicative context in an arid and artificial way. In some cases, the real purpose of the research has been withheld or obscured from adult bilinguals in case this would influence the findings. Here, the fullest briefing possible was given to engage positive participation. News broadcasts were not included as written discourse read aloud is considered inappropriate (Gillies 2013; Pöchhacker 2004): its content is densely-packed and changes dramatically every few minutes. Seleskovitch and Lederer (1995: 53) classify different types of speech according to level of difficulty, beginning with narrative speeches on a topic the person is familiar with and proceeding to more stylistically complex speeches requiring terminological preparation and rhetorical speech. Further, Lederer (2001: 177) writes that the best type of speech for novice interpreters is a practical narrative, and thereafter more difficult abstract, argumentative, descriptive and expressive speeches.

I sourced speeches for the tasks from the European Commission Directorate-General for Interpreting Speech Repository<sup>1</sup>, which includes speeches for novice interpreters. The European Commission's Directorate-General Interpreting has been training and testing interpreters for decades. I first analysed each of the speeches available in the SI-for-beginners category. Topics considered too difficult or too specific had to be rejected along with those requiring prior research, as participants could not be expected to be familiar with them: breeds of livestock in danger of extinction, James Dyson's inventions, Persepolis and linguistic legislation in Quebec, for example. Any speeches dating back several years were also eliminated due to the fact that some of the participants were too

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<sup>1</sup> <https://webgate.ec.europa.eu/sr/>

young to be familiar with events taking place at this time: European Road Safety Day 2007 and May 2010: Europe and the Electric Car, for instance. Similarly, I deemed certain material inappropriate, too abstract or dealing with politically correct terms (e.g. Men, Women and Sex, Islamic Clothing and Policies for the Disabled).

The duration of the speeches was then considered. At the time of designing the SI tasks, the available speeches ranged from 5m35s to 9m49s in English, 5m00s to 14m28s in French, 6m18s to 12m27s in Spanish and 4m43s to 10m15s in Italian. I was unable to finalise my choice of speeches until after the piloting period. I first trialled by isolating three minutes of speech from within speeches considered to cover topics of general knowledge but these speeches overwhelmed the pilot participants, some of whom remained silent throughout. The sections did not make sense as stand-alone speeches without the help of the information immediately preceding or following and consequently the entire speeches had to be eliminated from the selection process. This prompted me finally to trial consecutive interpreting speeches which covered topics all participants would be more familiar with.

From the consecutive speeches on offer in the repository, I chose topics which did not require specialist knowledge and should be familiar to all participants and I ensured no speech exceeded 3.5 minutes. I selected speeches where the input rate was appropriate for the participants, with natural pauses, and where the speaker gave a smooth delivery with minimal hesitations and false starts. Details regarding the topics chosen for each language can be found below and the speeches can be accessed online as shown:

**Table 2: Overview of SI task topics**

| <b>Topic</b>                               | <b>Language</b> | <b>Time</b> |
|--|-----------------|-------------|
| London Tube etiquette <sup>2</sup>         | English         | 02:45       |
| Facebook <sup>3</sup>                      | French          | 03:28       |
| Jogging <sup>4</sup>                       | Spanish         | 02:30       |
| Young people and social media <sup>5</sup> | Italian         | 03:00       |

#### **4.4 Assessment of the SI Tasks**

Measuring and evaluating interpreting performance is a controversial topic (Riccardi 2002) and ‘there exist a number of knowledge gaps’ (Campbell and Hale 2003: 217) in the methods for evaluating interpreter performance. Early interpreting assessment focused on errors in language and omissions, etc. (Barik 1969) and went on to include different types of mistakes (such as form and content, for example) and error seriousness (Altman 1994). Falbo (2002) concludes that incoherence, lack of information, lack of fluency and omissions constitute the majority of interpreting mistakes. The issue of quality ‘is a subjectively weighted sum of a number of components’ (Gile 1995b: 151). To reduce rater subjectivity and balance possible intuitiveness differences (required in assessing performance quality) (McNamara 1996), it is vital that a standardised method of evaluation be used and that individual raters interpret the assessment criteria in the same manner as far as possible. Consistency between source language and target language – or fidelity and accuracy – is commonly proposed as the principle criterion in interpreter performance quality. The aim is to produce a message ‘that is grammatically and semantically correct, sounds natural in the target language and communicates the same message as the original’ (Gillies 2013: 220). In professional interpreting, other important criteria include how well the interpreter’s rendition can be understood, appropriate use of language/grammar, clarity, adherence to the professional code and style of delivery. Although interpreting researchers are increasingly turning

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<sup>2</sup> <https://webgate.ec.europa.eu/sr/speech/tube-etiquette>

<sup>3</sup> <https://webgate.ec.europa.eu/sr/speech/facebook>

<sup>4</sup> <https://webgate.ec.europa.eu/sr/speech/footing>

<sup>5</sup> <https://webgate.ec.europa.eu/sr/speech/giovani-e-social-network>

their attention to formalising professional standards of quality, there nonetheless remains a shortage of research on interpreter quality evaluation.

The weighting given to each of the criteria above depends on the purpose of the interpreting and the opinion of the rater. Universities around the world adopt a range of evaluation methods, including a percentage system which favours certain elements over others (fidelity, content, meaning, etc.) and some place emphasis on student awareness, encouraging students to self-assess. The University of Prague, for example, emphasises fidelity, followed by presentation and language (Postigo Pinazo 2008). The University of Málaga places emphasis on student awareness and encourages students to self-assess according to the following criteria: documentation and note-taking; macrostructure: basic information; microstructure: specific terminology, coherence, syntax, register, omissions, additions; equivalence problems: solutions and strategies; supra-segmental features: intonation, accent and rhythm; phonological features: pronunciation; rhetorical techniques: visual contact, pet phrases, stammering, control of gestures and posture; verbal agility and fluency (Postigo Pinazo 2008). However, Gile's (1995b) study found that students were not reliable evaluators of fidelity in their peers.

The Monterrey Institute of International Studies looks for meaning and clarity first, followed by style and presentation. Interpreting researchers have focused on evaluation methods to determine interpreter quality (Bühler 1984; Garzone 2002; Gile 1990, 1995a, 1995b, 2001, 2005; Kopczynski 1994; Kurz 1989b, 1989a, 1993). Mackintosh (1983) developed a scoring system based on 'semantic equivalence' (2002) and Schjoldager (1996) approached the issue from a pedagogical standpoint. Riccardi's (2002) assessment criteria are divided into macro-criteria - equivalence, precision, adequacy, functionality - and micro-criteria, which include interpreter technique, pronunciations and omissions. Schjoldager (1996) proposed four criteria to evaluate SI interpreter quality: comprehensibility and delivery, language, coherence and plausibility and loyalty. The focus is on comprehensibility and delivery as, if the interpreter cannot be understood, the other criteria are no longer relevant. A drawback of both Riccardi and Schjoldager's matrices, however, is that neither includes a scoring rubric.

When investigating how best to evaluate participants in this study, I contacted the Course Directors of several Master's in Interpreting courses in the United Kingdom and asked if it would be possible for them to share their evaluation criteria with me. Unfortunately, they were unable to disseminate this information but they suggested I make use of Gillies (2013) student practice book. As a result, I employed an adapted version of Schjoldager's (1996) assessment of interpreter performance as presented in Gillies (2013) student practice book (see Appendix 2). Although it was originally intended for trainee interpreters wishing to become accredited, I felt it suited the purpose of this project, particularly as the rubric focuses on the importance of comprehensibility and eliminates at the first stage those who fail to communicate the message comprehensibly (see 4.4.1 below).

#### **4.4.1 Ranking Criteria for the SI Task**

The ranking criteria for the SI task included 15 questions in total. Raters did not progress beyond the first question (*Does the interpretation make sense as a whole?*) if the interpretation was ranked incomprehensible overall. The remaining 14 questions carried equal weighting. The ranking constructs and subconstructs used were:

1. Does the interpretation make sense as a whole?
  2. Convincing performance? (whether or not the interpreter was convincing)
- Coherence and plausibility:
    3. non-sequiturs
    4. unfinished sentences
  - Faithfulness:
    5. serious omissions
    6. unjustified changes
    7. unjustified additions
  - Delivery:
    8. fillers
    9. unnatural intonation
    10. corrections
  - Language:
    11. mispronunciations
    12. grammatical mistakes
    13. source language interference
    14. accent
    15. idiomatic language.

#### **4.4.2 Raters**

In order to evaluate the SI task performances, a group of four raters assessed the interpreting output. My own language combination is English: A, French: B, Spanish: C and Italian: C and therefore I am fully competent to assess all of the SI tasks. As such, I acted as one of the raters for each of the language groups. I am, however, most comfortable assessing the speeches into English. As the aim is for listeners to receive the same message as those listening to the original (Seleskovitch 1998), a native speaker-cum-interpreter of each of the languages was chosen to attest to whether or not this was achieved in the participants' other language: a native French-speaking trained interpreter for the French tasks, a native Spanish-speaking trained interpreter for the Spanish tasks and a native Italian-speaking trained interpreter for the Italian tasks. This ensured that all participants were evaluated by a native speaker in both of their languages.

The raters were active, trained, experienced interpreters known to me personally in the course of my interpreting work. They were therefore familiar with training manuals and assessment procedures as outlined in Chapter 3 of this thesis. In advance of the evaluation day, I provided raters with a copy of the Participant Information Leaflet and a copy of my adapted evaluation rubric. I emailed them a copy of the evaluation template and the link to the speech repository webpage so they could familiarise themselves with the speeches in their language combination ahead of the evaluation. I briefed raters in detail as to the nature of the SI tasks performed by the participants and they were invited to ask questions or for clarification. I was satisfied that they understood what they were expected to do and would carry out their duties professionally.

On the evaluation day, each rater listened to the speeches which formed the basis of the SI task in their respective language combination. Raters listened to each participant's performance first into and then out of English at one sitting (again, due to time restrictions) but did not discuss with me scores given, thus assuring maximum independence. I met with each of the raters on several different occasions as the recordings totalled approximately 20 hours per language and it was not possible to evaluate all participants in each language combination in one sitting. Raters were first asked to fail or pass each participant on the first criterion of whether the interpretation made sense as a whole and then rate the impact of each of the 14 categories in the rubric on a scale from 1, which equates to

considerable impact to 5, which indicates that there were no examples of this error. In question 9, raters were asked how convincing the interpreter was overall and could give a score ranging from 1 for unconvincing to 5 for convincing. In question 14, raters were asked how accurately idiomatic language is rendered and could give a score ranging from 1 for very inaccurately to 5 for very accurately. The final total was then calculated before being converted into a percentage. Data was exported and analysed quantitatively using SPSS.

In collating my assessments with those of each of the individual raters, I noted that the consistency between their marks and mine was striking. For instance, the three other raters failed the same participants as I did in the same tasks. During data analysis I observed that their assessment of ranking criteria in each of the other fourteen categories mirrored mine closely.

#### **4.5 SI Task Data Preparation**

The SI task raters assessed participant performance using a printed version of the evaluation template (Appendix 2). This meant that the results had to be inputted manually into an Excel spreadsheet. For every participant, there was a score from 1 to 5 for each of the 14 assessment categories from two raters. From these scores, I calculated the average score of both raters for each category for each participant and checked by a second researcher for accuracy. Raw scores were converted into percentages for use in the descriptive statistics component of this doctoral study. I imported the raw data into an SPSS data set and created a first column for Bilingual Type – simultaneous bilinguals were assigned a value of 1 and sequential bilinguals were assigned a value of 2 – in order to facilitate splitting the file at a later stage. This data set was later analysed quantitatively using SPSS.

This chapter has so far outlined two of the data collection instruments adopted in the mixed-methods design: the online Language Background Questionnaire and the adaptation of the experimental SI tasks. It has presented the steps taken to choose the SI speech material, the equipment and the location and it has set out the assessment criteria and the choice and role of the raters. It has also shown how the data from the questionnaire and the SI tasks were processed. The next section turns to the third data collection instrument: the Think-Aloud Protocols, which emerged from the piloting phase.

#### 4.6 Piloting

The online bilingual Language Background Questionnaire was piloted among eight sequential bilinguals. No simultaneous bilinguals were invited at this stage due to their scarcity in Dublin and my desire to retain them for the assessed tasks. Secondly, the simulated SI tasks were piloted thoroughly over a period of several weeks with the same eight participants. When the pilot participants came to the venue in Trinity College Dublin to participate in the pilot task, it was immediately apparent that few had read the Participant Information Form in sufficient detail. Consequently, I provided an oral summary of each of the research instruments. A page of instructions was typed in large font and laminated for each stage of the testing, which could be read aloud to all future candidates. Time would be allowed for them to read the information in more detail in order to ensure complete understanding of everything involved in the tasks.

Following Dillinger's (1994) method (see 4.2) I preceded the SI tasks proper by an unevaluated warm-up activity, in my case by two speeches, one into and one out of English. Initially, I used a variety of sources for this warm-up activity. Some proved too difficult for pilot participants and which resulted in their silence, prompting me finally to opt for a general topic which routinely appears in the news: the migrant crisis. A documentary on this topic was chosen in each language and segments lasting two minutes were selected. In the documentaries, the presenters did not read from a script to camera but spoke in natural dialogue and conversation at a normal pace and provided extensive visual prompts. Participants were not asked to interpret simultaneously at this point. Instead, they were asked to listen and watch in one language and tell me in as much detail as possible about what they were hearing, this time in their other language. Participants were told that this warm-up activity was not intended to be an SI activity and they could provide as little or as much information about the documentary as they wished. The warm-up activity continued with a similar documentary, this time in the participants' other language. A time limit of two minutes had been set for each warm-up to prevent burn-out in the assessed SI tasks, but people's needs varied greatly, and this was extended when participants requested more time. Participants agreed that this settled nerves and reassured them ahead of the SI task. All commented that they appreciated the chance to do a preparatory, unassessed test beforehand.



The pilot test showed participants' eagerness to 'explain' their performance and seek validation. During piloting, therefore, it became clear that 1) guidelines were necessary both before and after the SI tasks – all pilot study participants wished to give considerable feedback on their performance – and that 2) this would provide an opportunity for me to capture data on the participants' self-perception of the tasks themselves. Following the piloting, I therefore added six informal pre- and post-interpreting task questions as an integral part of the SI task activity on the day. The pre-task questions asked where participants believed their strengths might lie, which aspects of the SI tasks they thought they might struggle with and how they felt about participating in the tasks. A further question was added regarding how participants felt their languages were stored. The post-task questions asked if the experience had matched their expectations and if they had felt the way they expected to feel. Immediately following the warm-up stage of the SI task, the first of the Think-Aloud Protocols was carried out. I asked the participants the following questions:

- Do you feel your languages are stored in a particular way in your mind and how do you access them?
- Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention.
- Do you think there are any aspects that you might struggle with?
- How are you feeling before you start the activity?

Immediately after the SI task was completed, the second of the Think-Aloud Protocols was completed and three further questions were asked:

- Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?
- Do you think that this kind of activity would get easier with practice?
- Did you feel any differently during the interpreting compared to how you felt beforehand?

It was felt that this informal line of questioning at the time of testing itself might be advantageous in concentrating the participants' minds and eliciting more natural and informative feedback than further written questions on the day. It had the added advantage of providing a lead-in and a de-brief phase to the SI tasks.

#### **4.7 Think-Aloud Protocols**

As can be seen above, the piloting phase resulted in the addition of pre- and post-task questions which constituted the Think-Aloud Protocols (TAP). Think-aloud methods originated in cognitive psychology and form an introspective research method that facilitates the verbalisation of what participants are thinking as they take part in tasks and solve problems, etc. Verbal reports or protocols are created as a result of this process. Generally speaking, introspective methods are conducted in two ways: there is a think-aloud activity which takes place in real-time and involves respondents verbalising their inner thought processes as they complete a task or a retrospective interview which is carried out upon completion of the task (Dörnyei 2007). Second language research is an area that benefits from this technique as it allows researchers to examine respondents' thinking processes as they participate in linguistic tasks (Kormos 1998, cited in Dörnyei 2007). Ericsson and Simon (1980: 247) described using verbal reports as 'thoroughly reliable' in terms of providing information on respondents' inner thoughts. It is important that, on the one hand, researchers do not select a think-aloud task which is too challenging and which might disrupt the vocalisation of the inner thought (Ericsson and Simon 1980). On the other hand, a task which is too straightforward may approximate automaticity and therefore 'the more problematic it may be for readers to describe these automatic or near-automatic happenings' (Pressley and Afflerbach 1995: 132). It is thought that the most authentic responses come about as a result of tasks which prompt the natural emergence of verbal thoughts (Charters 2003). Researcher-led instructions and coaching are necessary ahead of the task: participants should first be shown what is expected of them and then provided with a warm-up activity (Dörnyei 2007).

Following the steps outlined above, the procedure for the think-aloud activity in this research project was designed in such a way as not to be cognitively overwhelming to the participants. Given the nature of SI, it was not possible for

the Think-Aloud Protocols to run concurrently. Instead, the first of the Think-Aloud Protocols was carried out immediately following the short warm-up activity. Responses were not videotaped and I sat informally beside them at the computer desk while they spoke. Their answers were recorded on a Dictaphone. Next, a thorough explanation of the SI tasks was provided verbally and on a laminated sheet of paper, which I gave to participants to study in more detail if they wished. Immediately after the SI task was completed, the second of the Think-Aloud Protocols was undertaken. Participants' performance and answers to the Think-Aloud Protocols were later transcribed (see Appendix 4).

#### **4.7.1 Think-Aloud Protocols Data Preparation**

The data preparation for the Think-Aloud Protocols was broken down into three stages: producing a transcribed account of the Think-Aloud Protocols, translating any comments articulated in languages other than English and anonymising the data. Producing a written report of spoken language requires transcription rules. One of the main concerns is loss of information but, more specifically, preserving the non-verbal components of respondents' speech. According to Mayring (2014: 45), many transcription conventions have been used in research. This project employed the 'pure verbatim protocol', where transcription is verbatim and all utterances are included. This ensures the transcription is close to the original speech but it may not facilitate easy reading. Any utterances in languages other than English were retained, with my translation immediately following in square brackets. The non-verbal aspects were not the focus of this transcription exercise, although they were important in transcribing participants' output in the SI tasks. Pauses, sighs, non-verbal activity and laughter were described in square brackets. In terms of the translation stage in the data preparation, most of the utterances in languages other than English were on a word or short sentence level. I provided the translations, verified by a second translator.

The final stage in preparing the data was the data anonymising phase. Participants were given a dual-purpose alpha-numerical identifier which indicated first whether they were a simultaneous (Sim 1-24) or a sequential bilingual (Seq 1-24). Secondly, this identifier allowed me to recognise which were EN<>FR, EN<>ES or EN<>IT bilinguals. Sims 1-8 and Seqs 1-8 were EN<>FR, Sims 9-16 and Seqs 9-16 were EN<>ES and Sims 17-24 and Seqs 17-

24 were EN<>IT. Once these identifiers were in place, any identifying personal information was then removed from the transcripts of their SI performances. For the purposes of this research, no particular significance is attached to which of the three language-combination groups the participants fell into.

The identifier not only indicates the simultaneous/sequential divide but also assists in understanding fully the participants' comments regarding their language combination when expressing their thoughts in the Think-Aloud Protocols. It is important also to note here that no indication of language dominance or balance can be attributed to the identifiers. Language dominance or balance was extracted from the online questionnaire data, or in the case of one participant who did not provide this information, deduced from their comments which emerged in the TAP with regard to the two tasks, one out of and one into English. One task is into their *perceived* dominant language and the other is into their *perceived* weaker language and which language is perceived by them to be dominant will be clearly indicated in brackets or in the relevant column throughout the reporting of the qualitative findings (see Tables 31-36). No objective measurement of dominance can be inferred from either the questionnaire or the participants' comments on the task day.

Following Dörnyei's (2007: 246) four stages of content analysis, the first step in analysing this data involved transcribing participants' answers to the Think-Aloud Protocols from the audio recordings. Following this, the transcriptions were uploaded into the NVivo qualitative software programme. This was followed by the pre-coding phase. As Richards (2014: 69) writes:

There is no alternative to reading and reflecting on each data record, and the sooner the better. This is purposive reading. Aim to question the record and add to it, to comment on it and to look for ideas that lead you up from the particular text to themes in the project.

Having been present while participants carried out the SI tasks and having been the person to transcribe the audio recordings, I deliberately chose to leave the coding process until as late as possible in the research project so I would be less familiar with the content and have fewer pre-conceived categories in mind in relation to the participants' think-aloud contributions. This stage involved meticulous, thorough reading of the transcriptions.

#### **4.8 Administering the Adapted SI Task**

After the piloting phase and the addition of the TAP, the adapted SI task was implemented as follows. The pre-task-day data collection procedure began with the emailing of the Participant Information Leaflet and a copy of the Informed Consent Form to all the bilingual participants. They were asked to complete and return the online Bilingual Language Questionnaire ahead of the SI tasks. When these were received a meeting time that suited each participant was scheduled.

On the day of the task, each participant was invited to sign a copy of the Informed Consent Form and they were reminded that their performance would be recorded and transcribed. A sound check was completed to ensure participants could hear well through the headset. I read aloud to them the warm-up activity instructions and participants were free to ask as many questions as they wanted. I played the documentary on the computer screen and they listened and watched in the first language. They told me – in as much detail as they wanted – what they were hearing and seeing. The warm-up activity was then repeated in the other language. I set two minutes for each of these activities but this time allocation was extended for those who felt they needed longer. The first Think-Aloud Protocol was then conducted by my asking participants to tell me how they thought their languages were stored, where they believed their strengths might lie in the SI tasks, which aspects of the SI tasks they thought they might struggle with and how they felt about participating in the tasks. Instructions in printed form were given as to how to proceed with the SI activity. These were handed to the participants to read and were also read aloud by me. The example below is taken from the tasks from French into English:

*Next is the simultaneous interpreting task into English. This is a 3m28s speech in French on the subject of Facebook. Below is some language you may find useful. You may want to take a few moments to think about the possible content of this speech before beginning.*

*média de socialisation, 'homo numéricus', narcissisme,  
Narcisse*

*Please click on the link when you are ready but do not listen to it ahead of time. It is imperative that you interpret the content the first time you hear it. Please begin interpreting into English as soon as the speech begins.*

I reminded them that, without their help, I would not be able to understand what was being said as I was not listening via headphones. Participants were given a short time to make notes and think about the topic of the speech. When participants were ready, I clicked on the speech repository link on the computer screen, they began interpreting simultaneously and their output was recorded. I gave participants time, if they wished, to take a glass of water and I then played the second SI speech, which they interpreted. I then conducted the post-task Think-Aloud Protocol. This time, I asked whether the experience had matched participants' expectations and if they had felt the way they expected to feel. The task was over once the post-task TAP had been completed.

#### **4.9 Think-Aloud Protocol Data Analysis**

The recordings of the answers to the TAP pre- and post-task questions were transcribed along with the participants' performances in the SI tasks themselves. They were then extracted and analysed by means of coding cycles to determine the themes which emerged. According to Saldaña (2015: 3), a code is a 'word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data.' Coding, therefore, involves working through transcribed text and noting the emergence of patterns and themes. Classifying themes and sub-themes allows the researcher to theorise and draw conclusions from their work. Further, data is 'segregated, grouped, regrouped and relinked in order to consolidate meaning and explanation' (Grbich 2012: 21). Richards and Morse (2007: 157) remark that

‘categorizing is how we get ‘up’ from the diversity of data to the shapes of the data, the sorts of things represented. Concepts are how we get up to more general, higher-level, and more abstract constructs’. Before proceeding to the coding process proper, it is important to decide what exactly should be coded. Some, such as Richards and Morse (2007: 146), propose the ‘If it moves, code it’ method. Lofland *et al.* (2006, cited in Saldaña (2015: 14) categorise social organisation according to nine units: 1) cultural practices, 2) episodes, 3) encounters, 4) roles and social types, 5) social and personal relationships, 6) groups and cliques, 7) organizations, 8) settlements and habitats and 9) subcultures and lifestyles. They propose that fusing these units with the following aspects generates themes which may be coded: 1) cognitive aspects or meanings, 2) emotional aspects or feelings and 3) hierarchical aspects or inequalities. This suggestion guided the first cycle of coding in this research project when units of analysis were determined. For example, I employed Values Coding in the first cycle to code cases where participants discussed their attitudes to second language learning and storage and their perceptions of their linguistic abilities. More detail is provided on the first cycle of coding in the following section.

#### **4.9.1 First-Cycle Coding**

There are two cycles involved in the coding process. In the first cycle, Saldaña (2015: 45) writes that seven processes take place: Grammatical, Elemental, Affective, Literary and Language, Exploratory, Procedural, and Themeing the Data. He suggests adopting a ‘generic’ (Saldaña 2015: 48) coding method, as described below:

1. Attribute Coding (for all data as a management technique): this involves storing vital information about the data and participants for future use.
2. Structural Coding or Holistic Coding (for all data as a “grand tour” overview): here, a single code is applied to every large unit of data, which allows a general picture to emerge of the potential themes which may emerge.

3. Descriptive Coding (for field notes, documents, and artefacts as a detailed inventory of their contents): simple labels are given to data and this allows the themes to be catalogued.

4. In-Vivo Coding, Initial Coding, and/or Values Coding (for interview transcripts as a method of attuning yourself to participant language, perspectives, and worldviews): the In-Vivo method allows for the participants' voice to be heard. Values Coding evaluates participants' values, beliefs and attitudes.

In the initial round of coding, I used Attribute Coding as all data was stored for future use. I began coding using the Holistic Coding method, labelling large units of data in order to view the emerging patterns in the data. Next, I employed Descriptive Coding, which allowed me to produce an inventory of themes using simple labels. I also used In-Vivo Coding and Values Coding to a certain extent since I allowed the emerging themes to be guided by the words of the participants themselves and coded participant beliefs and attitudes.

Data were coded electronically, using the Computer Assisted Qualitative Data Analysis (CAQDAS) programme, NVivo. Although the programme does not perform the coding itself, it 'efficiently stores, organizes, manages, and reconfigures your data to enable human analytic reflection' (Saldaña 2015: 22) and it is possible to organise your themes using a system of hierarchies and connections. In the first cycle, I read each participant's transcripts – stored as 'Sources' in NVivo. As themes emerged I assigned them a node.

Saldaña (2015) recommends using analytic memos as a means of creating further codes and categories. Writing analytic memos is akin to journal writing and can be viewed as a 'place to "dump your brain"' about the participants, phenomenon, or process under investigation by thinking and thus writing and thus thinking even more about them' (Saldaña 2015: 45). Their objective is to provide a platform for researchers to evaluate their coding choices and think about the bigger picture beginning to form through the emerging themes. The researcher keeps a record of his thoughts during the coding process in order to connect the dots, answer questions and view the data globally. Dey (1993: 89) comments that writing analytical memos 'should be a creative activity, relatively unencumbered by the rigours of logic and the requirements of corroborating



evidence.’ I used analytical memos in this research project in both the first and second cycles of the coding process of data analysis. In the initial coding phase, I recorded questions that occurred to me while reading the data, noted commonalities and differences in participant answers, sought connections between themes and noted the relationships between each of the themes and the overarching narrative that was beginning to emerge. This guided my reading in the second cycle and prompted me to pursue different directions from those I had originally followed in the previous phase.

#### **4.9.2 Second Cycle of Coding in Nvivo**

In the second-level coding process, I twice repeated the steps undertaken in the first cycle process, several weeks apart, in order to ensure that all of the content had been coded and to guarantee that I had not overlooked any important themes emerging from the verbalisation of their thought processes. I brought together themes that could be combined under one title and made a note of nodes which contained very few entries. Additionally, I made use of NVivo’s Explore option where nodes can be viewed schematically in order to brainstorm. In the first cycle of coding, 23 themes emerged. It was evident, however, that there was an element of overlap and duplication and, upon reflection, it seemed that some themes were not relevant to the research question. As a result, I merged themes where there was extensive cross-over and I deleted irrelevant themes. The final coding stage involved reviewing the themes which originated in the think-aloud process, evaluating the emerging patterns and selecting principal themes.

#### **4.10 Conclusion**

This chapter set out to present the research methodology used in this doctoral project. It reviewed the design of the mixed-methods approach and detailed the three data collection instruments: an online Language Background Questionnaire, a simulated simultaneous interpretation task and a two-phase Think-Aloud Protocol related to the task. It described the piloting phase and presented the data collection, preparation procedures and analysis procedures. The next chapter will present the quantitative data findings from the assessment of the SI task and the Language Background Questionnaire.



# Chapter 5: Quantitative Results

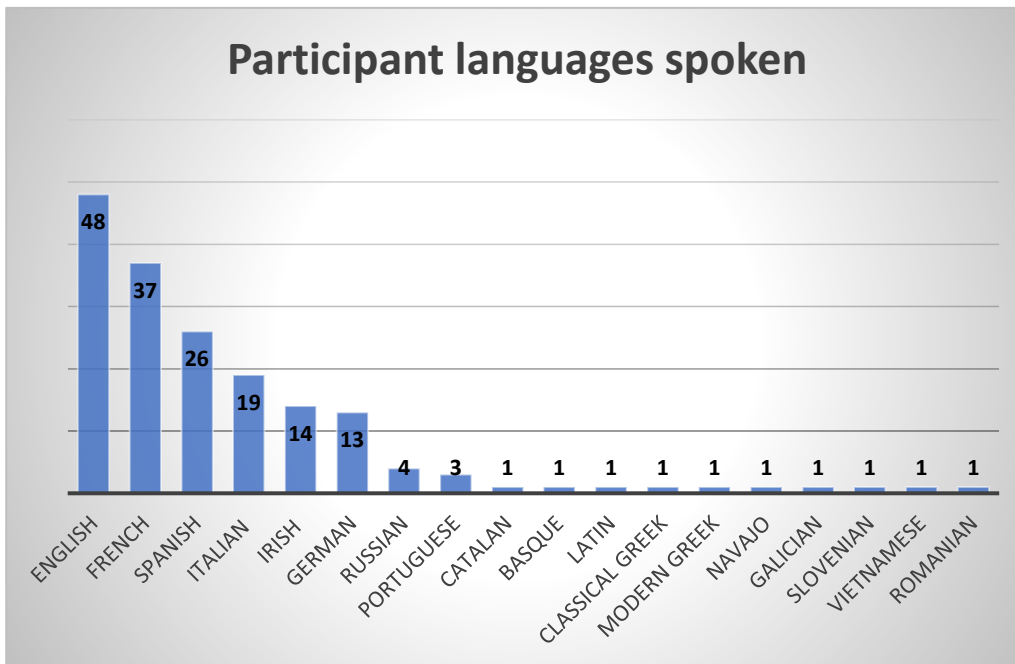
## 5.1 Introduction

This chapter presents the project's quantitative data findings. The overall objective of the research is to determine whether adult simultaneous bilinguals perform better than adult sequential bilinguals in the adapted bi-directional simultaneous interpreting task. The chapter contains six sections. The first section presents the research population. The second section explores the data provided by the Language Background Questionnaire completed by the participants prior to the completion of the SI tasks. The third section marks the presentation of the SI task scores, beginning with the descriptive statistics drawn from the participants' raw scores and their rankings in the SI task. The fourth section provides the inferential statistics employed to analyse the overall and individual SI task scores and the fifth section provides the inferential statistics employed to analyse the performances category by category. The sixth section moves beyond the descriptive and inferential statistics to address the matter of directionality and compares individual participant perceived dominance with their pre-and post-task predictions and in turn compares these pre- and post-task predictions with participant scores into and out of their dominant language.

## 5.2 Research Population

This project is a cross-sectional case study, evaluating a sample population of 48 participants divided into a group of 24 adult simultaneous bilinguals and a group of 24 adult sequential bilinguals. The two groups are differentiated by the age of acquisition of their two languages, the threshold for the second language being age three. It was not possible to acquire a sufficient number of available bilingual participants with the same language combination. Therefore, recruitment was extended to include those who spoke English/French or English/Spanish or English/Italian. Many of the participants, both simultaneous and sequential, spoke more than two languages (see Figure 5 below). For the purposes of this research, third and subsequent languages were disregarded.

Figure 5: Participant languages spoken



Eligibility criteria for the simultaneous bilinguals required adult participants raised before the age of three in English and one of French, Spanish or Italian. Having taken into account DeKeyser’s (2000a) criticism of Johnson and Newport’s (1989) length of residence (LoR) of late learners, this project recruited participants in the sequential bilingual category who had been using their L2 for a minimum of 10 years in order to allow for ultimate attainment levels to be reached. Birdsong (1992) points out the importance of not neglecting these most advanced learners in order to understand the factors that may contribute to their success. All participants carried out one SI task into English from their other language and one simultaneous task out of English into their other language. The acronym FRESIT was adopted to represent the language interpreted into from English, in other words, French or Spanish or Italian, and will be used here and throughout the following chapters. It is important to recall at this point that the bi-directional tasks were administered to the participants without objective confirmation of which of their two languages, be they EN<math>\diamond</math>FR, EN<math>\diamond</math>ES or EN<math>\diamond</math>IT, was dominant and to stress that the acronym FRESIT conveys only the language other than English into which SI was performed and makes no reference to language dominance.

### **5.2.1 Recruitment and Sampling**

Non-probability sampling and convenience/snowball sampling was used. Invitations were emailed to colleagues and friends who met the criteria from Trinity College Dublin, Embassies and various language centres in Dublin and I subsequently relied on the snowball effect. Due to the limited size of the possible sample population, the sequential bilingual group was expanded to include later learners. Recruitment stopped at 48 participants when there was an equal number of simultaneous (eight) and sequential (eight) bilinguals in each of the three language combinations.

### **5.3 Questionnaire Data on Participant Backgrounds**

The Language Background Questionnaire provided descriptive statistics on the gender, age, place of birth, employment and education of the participants in this study. It also detailed the countries where participants attended school, the languages they speak and the order in which they acquired them and the amount of time spent living, studying and working in the languages of this doctoral research.

#### **5.3.1 Gender**

In total, there were 33 females (69%) and 15 males (31%): in the simultaneous group there were 14 females (58%) and 10 males (42%) and in the sequential group there were 19 females (79%) and 5 males (21%). Although participant ages ranged from 18 to early 60s, the majority fell into the 23-27 (21 or 44%), 18-22 (6 or 13%) and 28-32 (5 or 11%) age brackets. Table 3 below presents the breakdown by gender.

*Table 3: Breakdown by gender (N=48)*

| <b>Total Females</b> | <b>Total Males</b> | <b>Number of female simultaneous bilinguals</b> | <b>Number of male simultaneous bilinguals</b> | <b>Number of female sequential bilinguals</b> | <b>Number of male sequential bilinguals</b> |
|----------------------|--------------------|---|---|---|---|
| 33                   | 15                 | 14  | 10  | 19  | 5   |

### **5.3.2 Age**

The participant age range was from 18 to the early 60s, although more than half of the participants were aged 32 and under. Table 4 outlines the age range of the participants:

*Table 4: Participant age range*

| <b>Age range</b> | <b>Number of participants</b> |
|------------------|-------------------------------|
| 18-22            | 6                             |
| 23-27            | 21                            |
| 28-32            | 5                             |
| 33-37            | 4                             |
| 38-42            | 1                             |
| 43-47            | 1                             |
| 48-52            | 4                             |
| 53-57            | 3                             |
| 58-62            | 2                             |
| 63-67            | 1                             |

### **5.3.3 Place of Birth**

Participants were born in eight different countries, Ireland (40%), Italy (23%), Spain (15%), France (8%), the U.K. (6%), the USA (4%), Puerto Rico (2%) and Mexico (2%).

### **5.3.4 Occupations**

The range of participant occupations was diverse, with 25 participants in paid employment, one a full-time unpaid parent and 22 participants engaged in studies. Of those in paid employment, five were teachers, four were university

lecturers or professors, four were in administration and there were 10 other occupations, ranging from civil servant to lawyer.

### 5.3.5. Education Levels

All participants had completed secondary education and 89% of participants had pursued or were still pursuing third-level studies or professional training. Within this group, 33% of participants held an Undergraduate qualification and 37% held a taught Master's degree, with 17% having completed a Ph.D.

Table 5 below presents the range of educational qualifications of the

|                                      | <b>Simultaneous bilinguals (N=24)</b> | <b>Sequential bilinguals (N=24)</b> |
|--------------------------------------|---------------------------------------|-------------------------------------|
| <b>Secondary school</b>              | 5 (21%)                               | 0                                   |
| <b>Undergraduate degree</b>          | 11 (46%)                              | 5 (21%)                             |
| <b>Master's (taught)</b>             | 5 (21%)                               | 12 (50%)                            |
| <b>Master's (research)</b>           | 0                                     | 1 (4%)                              |
| <b>PhD</b>                           | 2 (8%)                                | 6 (25%)                             |
| <b>Professional training/diploma</b> | 1 (4%)                                | 0                                   |

simultaneous and sequential bilinguals.

|                                      | <b>Simultaneous bilinguals (N=24)</b> | <b>Sequential bilinguals (N=24)</b> |
|--------------------------------------|---------------------------------------|-------------------------------------|
| <b>Secondary school</b>              | 5 (21%)                               | 0                                   |
| <b>Undergraduate degree</b>          | 11 (46%)                              | 5 (21%)                             |
| <b>Master's (taught)</b>             | 5 (21%)                               | 12 (50%)                            |
| <b>Master's (research)</b>           | 0                                     | 1 (4%)                              |
| <b>PhD</b>                           | 2 (8%)                                | 6 (25%)                             |
| <b>Professional training/diploma</b> | 1 (4%)                                | 0                                   |

*Table 5: Level of education*

Whilst it would appear on the surface that the sequential bilinguals are more highly qualified than the simultaneous bilinguals, the simultaneous participants are younger overall than the sequential bilinguals. The simultaneous group's ages range from 18 to 57, with 23 out of 24 being in the 18-37 age bracket. The sequential group's ages range from 23 to 67, with 13 in the 23-37 age brackets and 11 in the 38-67 age brackets. No-one in either group was unemployed at the time. As a result, age and educational level do not appear to be factors which would explain the differences between the two groups in the SI task.

### **5.3.6 Order of Acquisition of Languages Spoken by Participants**

Sixteen of the participants were tested in French<>English, 16 in Spanish<>English and 16 in Italian<>English. By definition the 24 simultaneous bilinguals, eight in each of the language categories above, acquired both these languages together prior to the age of three. The sequential bilinguals, also eight in each of the language categories, fall into two groups: those who acquired English first and then FRESIT (six), and those who acquired FRESIT first and then English (18).

#### **5.3.6.1 Languages Spoken to and by Participants in Childhood**

The following four tables present the languages spoken to and by participants during childhood. In each table, columns 2 and 5 should be used for comparisons between languages spoken to and by interlocutors in the case of simultaneous bilinguals and columns 3 and 6 compared for sequential bilinguals. Table 6 shows that participants always responded to their siblings in the language in which their siblings spoke to them. In all cases, identical percentages are recorded.



**Table 6: Languages spoken by and to participants' siblings during childhood (N=48)**

| <b>1</b>  | <b>2</b>                   | <b>3</b>                 | <b>4</b>  | <b>5</b>                   | <b>6</b>                 |
|---|----------------------------|--------------------------|---|----------------------------|--------------------------|
| <b>Language(s) spoken by siblings to participants</b> | <b>Simultaneous (N=24)</b> | <b>Sequential (N=24)</b> | <b>Language(s) spoken to siblings by participants</b> | <b>Simultaneous (N=24)</b> | <b>Sequential (N=24)</b> |
| <b>English</b>  | 13 (54%)                   | 6 (25%)                  | <b>English</b>  | 13 (54%)                   | 6 (25%)                  |
| <b>French</b>   | 0                          | 3 (13%)                  | <b>French</b>   | 0                          | 3 (13%)                  |
| <b>Spanish</b>  | 0                          | 4 (17%)                  | <b>Spanish</b>  | 0                          | 4 (17%)                  |
| <b>Italian</b>  | 1 (4%)                     | 5 (21%)                  | <b>Italian</b>  | 1 (4%)                     | 5 (21%)                  |
| <b>Combination of two languages</b>                   | 6 (25%)                    | 2 (8%)                   | <b>Combination of two languages</b>                   | 6 (25%)                    | 2 (8%)                   |
| <b>No siblings</b>                                    | 4 (17%)                    | 4 (17%)                  | <b>No siblings</b>                                    | 4 (17%)                    | 4 (17%)                  |

Table 7 below shows that the language of response was less consistent where communication was with grandparents. In the simultaneous group, where the two sets of grandparents were monolingual in different languages, the participants replied consistently in those languages. Where the grandparents spoke to them in a combination of two languages, there was a slight trend towards replying to them in one language. The sequentials did not necessarily have one set of grandparents who spoke to them in one language and another set who spoke to them in another but in their group, where there was a difference of language, there was a greater tendency to reply to grandparents monolingually. Some of these grandparents spoke a combination of one of the languages in this study and one language not in this study, for example, Galician, Basque and Italian dialect.

*Table 7: Languages spoken by and to participants' grandparents during childhood*

| <b>Language(s) spoken by grandparents to participants</b>                         | <b>Simultaneous (N=24)</b> | <b>Sequential (N=24)</b> | <b>Language(s) spoken to participants by grandparents</b>                         | <b>Simultaneous (N=24)</b> | <b>Sequential (N=24)</b> |
|---|----------------------------|--------------------------|---|----------------------------|--------------------------|
| <b>English</b>  | 0                          | 6 (25%)                  | <b>English</b>  | 1 (4%)                     | 6 (25%)                  |
| <b>French</b>   | 0                          | 3 (13%)                  | <b>French</b>   | 1 (4%)                     | 3 (13%)                  |
| <b>Spanish</b>  | 1 (4%)                     | 5 (21%)                  | <b>Spanish</b>  | 1 (4%)                     | 7 (29%)                  |
| <b>Italian</b>  | 1 (4%)                     | 4 (17%)                  | <b>Italian</b>  | 2 (8%)                     | 6 (25%)                  |
| <b>A combination of two languages</b>   | 15 (63%)                   | 5 (21%)                  | <b>A combination of two languages</b>   | 12 (50%)                   | 1 (4%)                   |
| <b>English by one set and the other language by the other set of grandparents</b> | 7 (29%)                    | 0                        | <b>English by one set and the other language by the other set of grandparents</b> | 7 (29%)                    | 0                        |
| <b>Italian dialect</b>  | 0                          | 1 (4%)                   | <b>Italian dialect</b>  | 0                          | 1 (4%)                   |

The progression towards monolingual responses becomes more noted in Table 8 for the simultaneous bilinguals in responding to caregivers during childhood (columns 2 and 5). Sequential bilinguals always responded to their caregivers in the same language that they were spoken to (columns 3 and 6 give identical percentages).

**Table 8: Languages spoken by and to participants' caregiver during childhood**

| <b>Language(s) spoken to participants by caregiver</b> | <b>Simultaneous (N=24)</b> | <b>Sequential (N=24)</b> | <b>Language(s) spoken by participants to caregiver</b> | <b>Simultaneous (N=24)</b> | <b>Sequential (N=24)</b> |
|--|----------------------------|--------------------------|--|----------------------------|--------------------------|
| <b>English</b>   | 9 (38%)                    | 2 (8%)                   | <b>English</b>   | 13 (54%)                   | 2 (8%)                   |
| <b>French</b>  | 1 (4%)                     | 3 (13%)                  | <b>French</b>  | 1 (4%)                     | 3 (13%)                  |
| <b>Spanish</b>   | 1 (4%)                     | 6 (25%)                  | <b>Spanish</b>   | 1 (4%)                     | 6 (25%)                  |
| <b>Italian</b>   | 3 (13%)                    | 3 (13%)                  | <b>Italian</b>   | 3 (13%)                    | 3 (13%)                  |
| <b>A combination of two languages</b>                  | 8 (33%)                    | 1 (4%)                   | <b>A combination of two languages</b>                  | 4 (17%)                    | 1 (4%)                   |
| <b>No caregiver</b>                                    | 2 (8%)                     | 9 (38%)                  | <b>No caregiver</b>                                    | 2 (8%)                     | 9 (38%)                  |

The trend towards monolingual responses becomes most marked for both bilingual types in communication with their parents during childhood (Table 9 below). The 18 simultaneous bilinguals whose parents spoke to them in a combination of two languages reduces to 11 who responded in a combination of two languages (columns 2 and 5). Notably, of the seven people (or 29%) who did not reply in a combination of two languages, five (or 21%) replied monolingually *in English*.

These findings may suggest that the simultaneous bilinguals in this group of participants experienced a higher degree of attrition of their FRESIT compared to the sequential bilinguals.

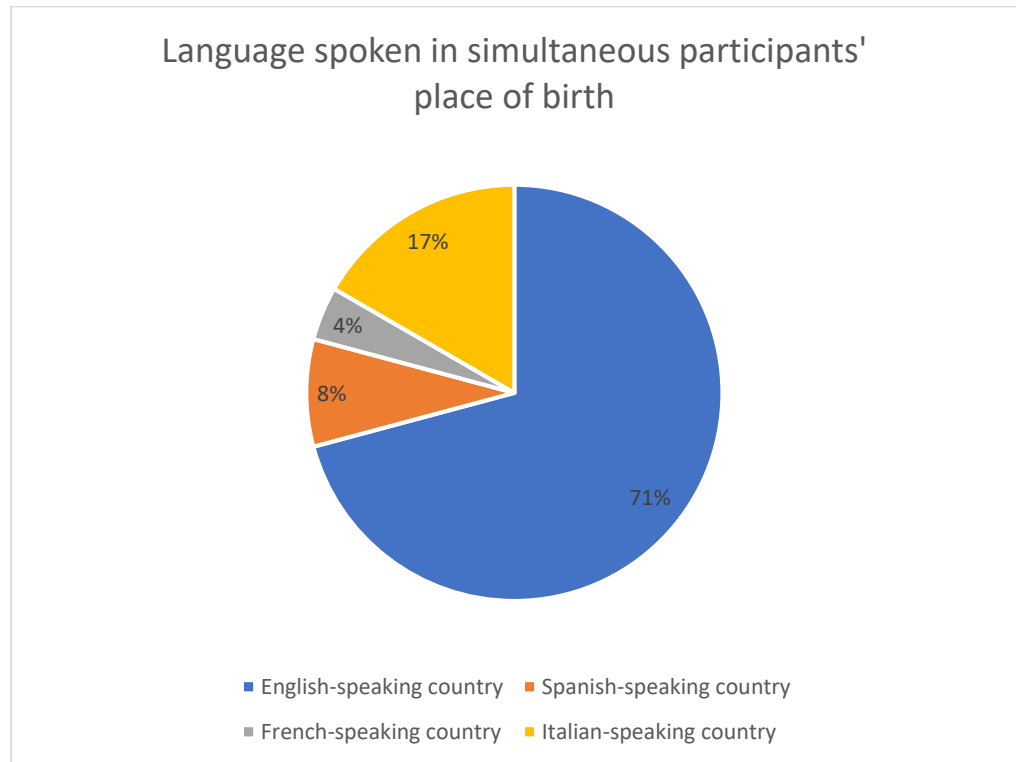
*Table 9: Languages spoken by and to participants' parents during childhood*

| <b>Language(s) spoken <u>by</u> parents <u>to</u> participants</b> | <b>Simultaneous (N=24)</b> | <b>Sequential (N=24)</b> | <b>Language(s) spoken <u>to</u> parents <u>by</u> participants</b> | <b>Simultaneous (N=24)</b> | <b>Sequential (N=24)</b> |
|--|----------------------------|--------------------------|--|----------------------------|--------------------------|
| <b>English</b>   | 2 (8%)                     | 5 (21%)                  | <b>English</b>   | 7 (29%)                    | 6 (25%)                  |
| <b>French</b>  | 2 (8%)                     | 3 (13%)                  | <b>French</b>  | 1 (4%)                     | 4 (17%)                  |
| <b>Spanish</b>   | 0                          | 5 (21%)                  | <b>Spanish</b>   | 2 (8%)                     | 7 (29%)                  |
| <b>Italian</b>   | 2 (8%)                     | 5 (21%)                  | <b>Italian</b>   | 3 (13%)                    | 6 (25%)                  |
| <b>A combination of two languages</b>                              | 18 (75%)                   | 6 (25%)                  | <b>A combination of two languages</b>                              | 11 (46%)                   | 0                        |
|  |                            |                          | <b>Italian dialect</b>   | 0                          | 1 (4%)                   |

### 5.3.7 Historic Language Use

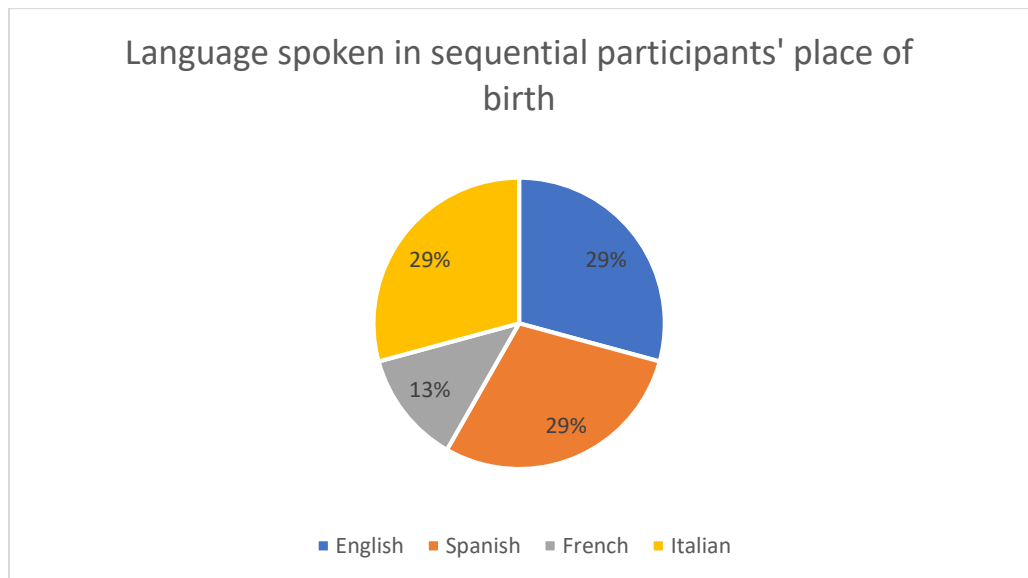
Seventy-one per cent of simultaneous participants were born in an English-speaking country and 29% in a FRESIT country (see Figure 6 below).

**Figure 6: Language spoken in simultaneous participants' place of birth (N=24)**



For the sequential bilinguals, 29% were born in an English-speaking country and 71% in a FRESIT-speaking country (see Figure 7 below).

**Figure 7: Language spoken in sequential participants' place of birth (N=24)**



All of the simultaneous bilinguals had spent more than five years, and 21 out of 24 had spent more than ten years, in an English-speaking country (see Table 10 below). By contrast, just over half of the simultaneous bilinguals had spent a period of one to three years in a FRESIT-speaking country, with four having

spent less than a year and seven having spent more than five years. In the sequential group, 16 out of 24 had spent 5+ years in an English-speaking environment but 21 out of 24 of them had spent 5+ years in a FRESIT-speaking country.

*Table 10: Total number of months/years spent in a country where English or FRESIT are spoken*

| Amount of time     | English             |                   | FRESIT              |                   |
|--------------------|---------------------|-------------------|---------------------|-------------------|
|                    | Simultaneous (N=24) | Sequential (N=24) | Simultaneous (N=24) | Sequential (N=24) |
| <b>0-6 months</b>  | 0                   | 1                 | 1                   | 1                 |
| <b>6-12 months</b> | 0                   | 1                 | 3                   | 0                 |
| <b>1-3 years</b>   | 0                   | 3                 | 13                  | 2                 |
| <b>3-5 years</b>   | 0                   | 3                 | 0                   | 0                 |
| <b>5+ years</b>    | 3                   | 3                 | 2                   | 1                 |
| <b>10+ years</b>   | 21                  | 13                | 5                   | 20                |

Twenty-three out of the 24 simultaneous bilinguals had spent 5+ years in an English-speaking family, whereas only 16 of them had spent the same length of time in a FRESIT-speaking family (see Table 11 below). In the sequential group, only 9 out of 23 had spent more than five years in an English-speaking family, whereas 18 had spent more than five years in a FRESIT-speaking country.

**Table 11: Total number of months/years spent in a family where English or FRESIT are spoken**

| Amount of time     | English             |                    | FRESIT              |                     |
|--------------------|---------------------|--------------------|---------------------|---------------------|
|                    | Simultaneous (N=24) | Sequential (n=23)* | Simultaneous (N=24) | Sequential (n=23) * |
| <b>0-6 months</b>  | 1                   | 12                 | 3                   | 4                   |
| <b>6-12 months</b> | 0                   | 1                  | 1                   | 1                   |
| <b>1-3 years</b>   | 0                   | 1                  | 4                   | 0                   |
| <b>3-5 years</b>   | 0                   | 0                  | 0                   | 0                   |
| <b>5+ years</b>    | 1                   | 0                  | 0                   | 1                   |
| <b>10+ years</b>   | 22                  | 9                  | 16                  | 17                  |

\*One participant did not answer

All of the simultaneous bilinguals had spent more than five years in an English-speaking educational and/or work environment, whereas only six of them had spent the same amount of time in a FRESIT-speaking educational and/or work environment (see Table 12 below). Eighteen of them had spent less than three years in a FRESIT-speaking country. The sequential bilinguals had spent a comparable amount of time in education and/or work environment.

*Table 12: Total number of months/years spent in education and/or working environment where English or FRESIT are spoken*

| Amount of time | English             |                   | FRESIT              |                    |
|----------------|---------------------|-------------------|---------------------|--------------------|
|                | Simultaneous (N=24) | Sequential (N=24) | Simultaneous (N=24) | Sequential (n=23)* |
| 0-6 months     | 0                   | 1                 | 11                  | 1                  |
| 6-12 months    | 0                   | 1                 | 3                   | 2                  |
| 1-3 years      | 0                   | 4                 | 4                   | 1                  |
| 3-5 years      | 0                   | 2                 | 0                   | 1                  |
| 5+ years       | 3                   | 1                 | 3                   | 1                  |
| 10+ years      | 21                  | 15                | 3                   | 17                 |

\*One participant did not answer

### 5.3.8 Historic Languages of Instruction

Primary and secondary education was completed through English for most of the simultaneous bilinguals (20 out of 24) and in French, Spanish or Italian for the majority of the sequentials (16 out of 24) (see Table 13 below).

*Table 13: Main language of instruction in primary and secondary school*

| Language                       | Primary             |                   | Secondary           |                   |
|--------------------------------|---------------------|-------------------|---------------------|-------------------|
|                                | Simultaneous (N=24) | Sequential (N=24) | Simultaneous (N=24) | Sequential (N=24) |
| English                        | 20                  | 6                 | 21                  | 6                 |
| FRESIT                         | 3                   | 16                | 2                   | 16                |
| A combination of two languages | 1                   | 2                 | 1                   | 2                 |

Only nine out of 24 simultaneous bilinguals studied English or FRESIT as a foreign or second language at primary school, compared with 13 out of 24 sequentials (see Table 14 below).



*Table 14: English and FRESIT as a foreign/second language at primary school*

| Language        | Simultaneous (N=24) | Sequential (N=24) |
|-----------------|---------------------|-------------------|
| Studied English | 3                   | 10                |
| Studied FRESIT  | 6                   | 3                 |

In secondary school, only two simultaneous bilinguals studied English as a foreign or second language, compared with 17 who studied FRESIT (see Table 15 below). In the sequential group 16 and 6 participants studied English and FRESIT as a foreign or second language at secondary school, respectively.

*Table 15: English and FRESIT as a foreign/second language at secondary school*

| Language        | Simultaneous (N=24) | Sequential (N=24) |
|-----------------|---------------------|-------------------|
| Studied English | 2                   | 16                |
| Studied FRESIT  | 17                  | 6                 |

### **5.3.9 Proficiency**

All the participants were asked to rate their proficiency in both their languages on a scale from 1, native-speaker or native-speaker-like proficiency, to 7, very limited proficiency, as shown in Table 16. It is important to recall that this self-assessment was not objectively tested. Simultaneous bilinguals rated their English proficiency higher than their FRESIT and the sequentials rated their French, Spanish or Italian marginally higher than their English.

**Table 16: Rating of English and FRESIT proficiency (1 = Native-speaker or native-speaker-like proficiency, 7 = Very limited proficiency)**

| Rating | English             |                   | FRESIT              |                   |
|--------|---------------------|-------------------|---------------------|-------------------|
|        | Simultaneous (N=24) | Sequential (N=24) | Simultaneous (N=24) | Sequential (N=24) |
| 1      | 23                  | 12                | 11                  | 18                |
| 2      | 1                   | 8                 | 9                   | 4                 |
| 3      | 0                   | 4                 | 2                   | 0                 |
| 4      | 0                   | 0                 | 2                   | 2                 |
| 5      | 0                   | 0                 | 0                   | 0                 |
| 6      | 0                   | 0                 | 0                   | 0                 |
| 7      | 0                   | 0                 | 0                   | 0                 |

All of the simultaneous bilinguals considered their English to be of native or near-native proficiency, with 23 rating themselves a 1 and one rating themselves a 2. Twenty of them feel the same about their other language but only 11 of them consider themselves in the top bracket and nine in the second bracket. Four of them place themselves in the third and fourth brackets. In the sequential group, half considered themselves to be of native proficiency in English and the other half are spread over the second bracket and third brackets. Two-thirds of the sequentials consider their other language to be of native proficiency, with the remaining six in either the second bracket or the fourth bracket. Overall, no simultaneous or sequential bilingual rated themselves below 4 out of 7. Simultaneous bilinguals rated their English proficiency higher than their FRESIT and the sequentials rated their FRESIT marginally higher than their English.

### **5.3.10 Daily Language Use**

All simultaneous bilinguals indicated that they are using English over half the time, with 19 of them always using English (see Table 17 below). Only 17 of them are using their other language more than half the time, with only five of these 17 always using their other language. Two of the simultaneous bilinguals do not use French, Spanish or Italian at all. In the sequential group, 22 are using English over half the time, with 11 always using English. However, only 14 of them are using FRESIT over half the time and only five of these 14 always use

FRESIT. Ten sequential bilinguals spoke FRESIT only occasionally. The same trend is discernible in the language used to browse the internet, with the trend in both bilingual types towards English and away from FRESIT.

*Table 17: Daily use of English and FRESIT with family and friends*

|                            | English             |                   | FRESIT              |                   |
|----------------------------|---------------------|-------------------|---------------------|-------------------|
|                            | Simultaneous (N=24) | Sequential (N=24) | Simultaneous (N=24) | Sequential (N=24) |
| <b>Always</b>              | 19                  | 11                | 5                   | 5                 |
| <b>Very often</b>          | 3                   | 7                 | 6                   | 6                 |
| <b>About half the time</b> | 2                   | 4                 | 6                   | 3                 |
| <b>Only occasionally</b>   | 0                   | 2                 | 5                   | 10                |
| <b>Never</b>               | 0                   | 0                 | 2                   | 0                 |

In terms of language used to listen to music/podcasts/radio, both the bilingual types use English more often (22 using it often and two using it sometimes) (see Table 18 below). Only three simultaneous bilinguals listen in FRESIT often and seven never listen in FRESIT. In the sequential group, 10 often listen in FRESIT.

*Table 18: Frequency of English or FRESIT as language to listen to music/podcasts/radio*

|                  | English             |                   | FRESIT               |                   |
|------------------|---------------------|-------------------|----------------------|-------------------|
|                  | Simultaneous (N=24) | Sequential (N=24) | Simultaneous (n=23)* | Sequential (N=24) |
| <b>Often</b>     | 22                  | 22                | 3                    | 10                |
| <b>Sometimes</b> | 2                   | 2                 | 8                    | 7                 |
| <b>Seldom</b>    | 0                   |                   | 5                    | 7                 |
| <b>Never</b>     | 0                   |                   | 7                    | 0                 |

\*One participant did not answer

In the case of browsing the internet the simultaneous bilinguals were overwhelmingly likely to browse in English (see Table 19 below) and the sequentials slightly more inclined to browse in English than in FRESIT

**Table 19: Likelihood of browsing the internet in English and FRESIT**

|                        | English                |                      | FRESIT                 |                      |
|------------------------|------------------------|----------------------|------------------------|----------------------|
|                        | Simultaneous<br>(N=24) | Sequential<br>(N=24) | Simultaneous<br>(N=24) | Sequential<br>(N=24) |
| <b>Very likely</b>     | 23                     | 15                   | 0                      | 1                    |
| <b>Somewhat likely</b> | 1                      | 9                    | 8                      | 14                   |
| <b>Unlikely</b>        | 0                      | 0                    | 15                     | 9                    |

In relation to language use at work, 12 simultaneous bilinguals use English either to a considerable degree or almost all of their working week, compared with five for FRESIT (see Table 20 below). Fifteen sequential bilinguals use English either to a considerable degree or almost all of their working week, compared with four for FRESIT. Two simultaneous bilinguals and one sequential do not work in their other language at all.

*Table 20: Language usage at work*

| English   |                         |                       | FRESIT  |                        |                      |
|---|-------------------------|-----------------------|---|------------------------|----------------------|
|   | Simultaneous<br>(n=13)* | Sequential<br>(n=15)* |   | Simultaneous<br>(n=9)* | Sequential<br>(n=7)* |
| Almost all of my working week is spent using English          | 10                      | 12                    | Almost all of my working week is spent using my other language          | 1                      | 0                    |
| I use English to a considerable degree during my working week | 2                       | 3                     | I use my other language to a considerable degree during my working week | 4                      | 4                    |
| I occasionally use English during my working week             | 1                       | 0                     | I occasionally use my other language during my working week             | 2                      | 2                    |
| I don't use English at all during a typical week at work      | 0                       | 0                     | I don't use my other language at all during a typical week at work      | 2                      | 1                    |

\*4 participants did not answer, leaving 22 in each bilingual group total

Twenty-two participants were engaged in full-time studies, 10 simultaneous and 12 sequential bilinguals. Sixteen reported that their studies were conducted through the medium of English, seven simultaneous and nine sequential bilinguals. Only two in each group were studying through a combination of two languages.

In sum, in this section, a general tendency over time by both simultaneous and sequential bilinguals has been noted towards increasing use of English over FRESIT. This can be explained by the fact that they are living and working or studying in Ireland.

## 5.4 SI Task Scores: Descriptive Statistics

This section first details the steps taken following completion of the evaluation of the performance of all 48 participants in the SI tasks. It then reviews the raw scores, beginning with the overall scores and average scores before moving to participant rankings into English and into FRESIT.

### 5.4.1 Overall Participant Rankings

Each participant was evaluated out of a maximum score of 70 in each task by each rater. An average percentage for each participant was then calculated, that is the average of both the SI task into English and the SI task out of English. Figure 8 below shows the broad spread of results from 0 to 91% in participants' overall scores. A score of 0 indicates that in both tasks the two raters have answered 'no' to the first evaluation question: Does the interpretation make sense as a whole? In that case the performance was rated incomprehensible overall and scored zero.

*Figure 8: Ranking of participants according to overall score (%) in the two SI tasks*

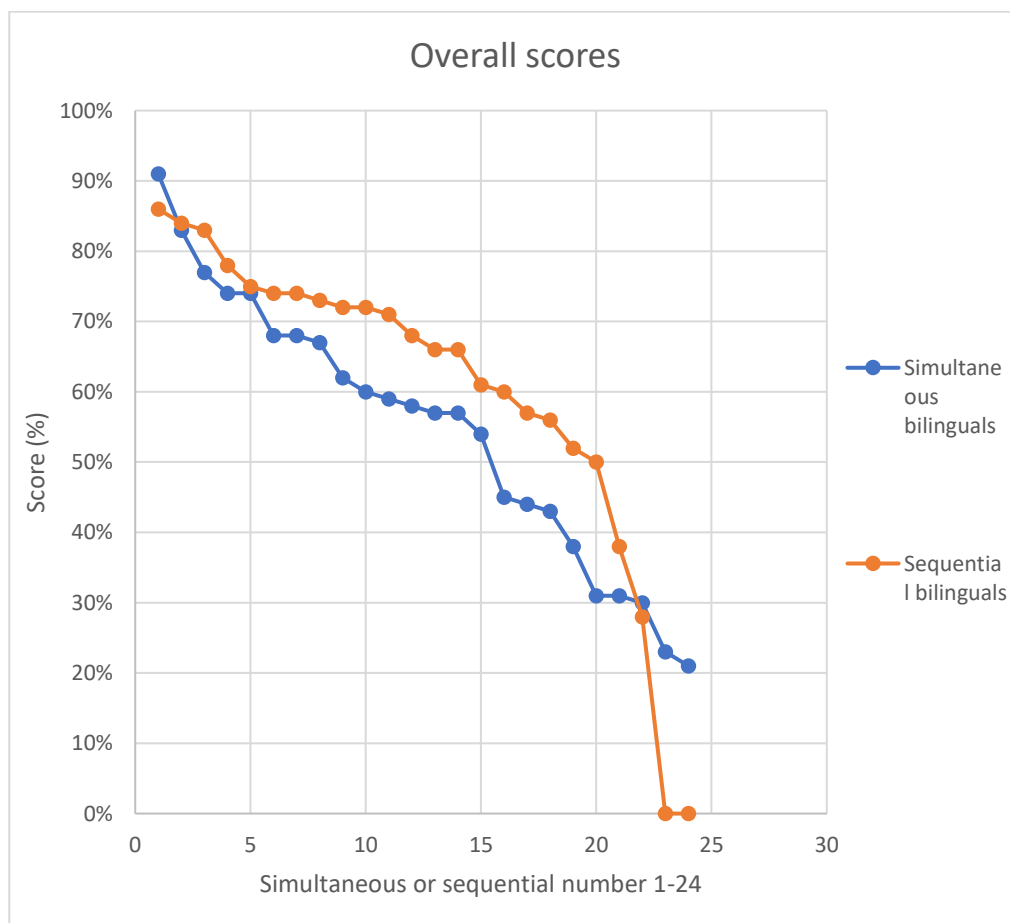


Figure 8 plots the graph showing the distribution of the scores of the simultaneous bilinguals (in blue) and the scores of the sequential bilinguals (in orange). The two sets of scores are very comparable. The scores for the simultaneous bilinguals' results are more evenly distributed along the 21-91% range, whereas the sequential bilingual group's scores are slightly more bunched towards the top of the 0-86% range. The two participants who failed overall were both sequential bilinguals. Whilst the top scorer was a simultaneous bilingual, the top 10 scores were evenly divided between simultaneous and sequential bilinguals.

The spread of participant scores which have been averaged across both raters and both tasks is provided in Table 21 below, which shows that three-quarters (75%) of participants scored over 51%. The average score overall was 57%. The band containing the highest number of participants is the 71-80% band.

*Table 21: Raw scores percentage bands for average of both tasks*

| <b>Percentage band</b> | <b>Number of participants (N=48)</b> |
|------------------------|--------------------------------------|
| 0-9%                   | 2                                    |
| 11-20%                 | 0                                    |
| 21-30 %                | 3                                    |
| 31-40 %                | 5                                    |
| 41-50%                 | 4                                    |
| 51-60%                 | 10                                   |
| 61-70%                 | 8                                    |
| 71-80%                 | 11                                   |
| 81-90%                 | 4                                    |
| 91-100%                | 1                                    |

Table 22 below provides the average scores according to bilingual type and task. The average score across all participants was 57%. Sequential bilinguals attained an average score of 60%, simultaneous bilinguals attained an average score of 55%. Therefore, at raw score overall average level, the sequential bilinguals are shown to outperform the simultaneous bilinguals (by 60% to 55%). The

breakdown of the overall average in the first column (57%) shows that the average score into English (60.5%) was higher than the average score into FRESIT (54%). The second column shows that the simultaneous bilinguals' scores were less consistent than the sequential bilinguals' scores, with the average score into English (61%) considerably higher than the average score into FRESIT (48%). The sequential bilinguals showed greater consistency, with an average score into English of 60% and an average score into FRESIT of 60%, giving an overall average score of 60%. Therefore, at raw score individual average level, the simultaneous bilinguals marginally outperformed the sequential bilinguals in the task into English (by 61% to 60%) and the sequential bilinguals outperformed the simultaneous bilinguals in the task into FRESIT (by 60% to 48%).

*Table 22: Average scores by bilingual type and task (%)*

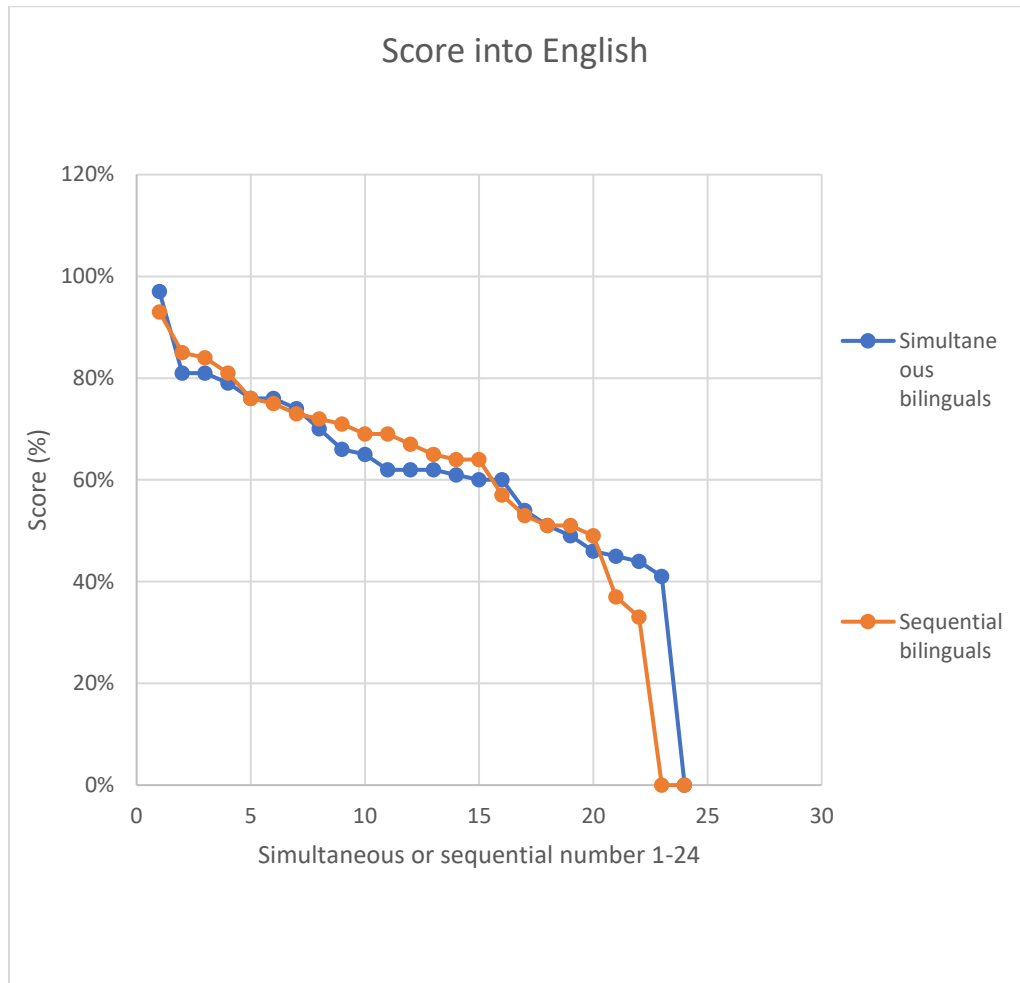
|                                       | <b>All participants<br/>(N=48)</b> | <b>Simultaneous<br/>bilinguals</b> | <b>Sequential<br/>bilinguals</b> |
|---------------------------------------|------------------------------------|------------------------------------|----------------------------------|
| <b>Overall average<br/>score</b>      | 57%                                | 55%                                | 60%                              |
| <b>Average score into<br/>English</b> | 60.5%                              | 61%                                | 60%                              |
| <b>Average score into<br/>FRESIT</b>  | 54%                                | 48%                                | 60%                              |

#### **5.4.2 SI Task into English**

Figure 9 below plots the graph showing the distribution of scores for each group in the SI task working into English only.



**Figure 9: Ranking of participants according to score (%) into English**



The scores for the simultaneous bilinguals and sequential bilinguals mirror each other extremely closely. This is the task in which the simultaneous bilinguals outperform the sequential bilinguals (by 61% to 60%). There is an overall spread of results from 0 to 97%. The range for the simultaneous bilinguals is 0-97% and for the sequentials is 0-93%. Again, the top scorer was a simultaneous bilingual and again the top 10 scores were evenly divided between simultaneous and sequential bilinguals. Three individuals failed this task: one simultaneous and two sequential bilinguals.

Table 23 below shows the raw score percentage bands for the task into English, where again more than three-quarters (77%) of participants scored over 51%. The average score for all 48 participants into English was 60.5%.

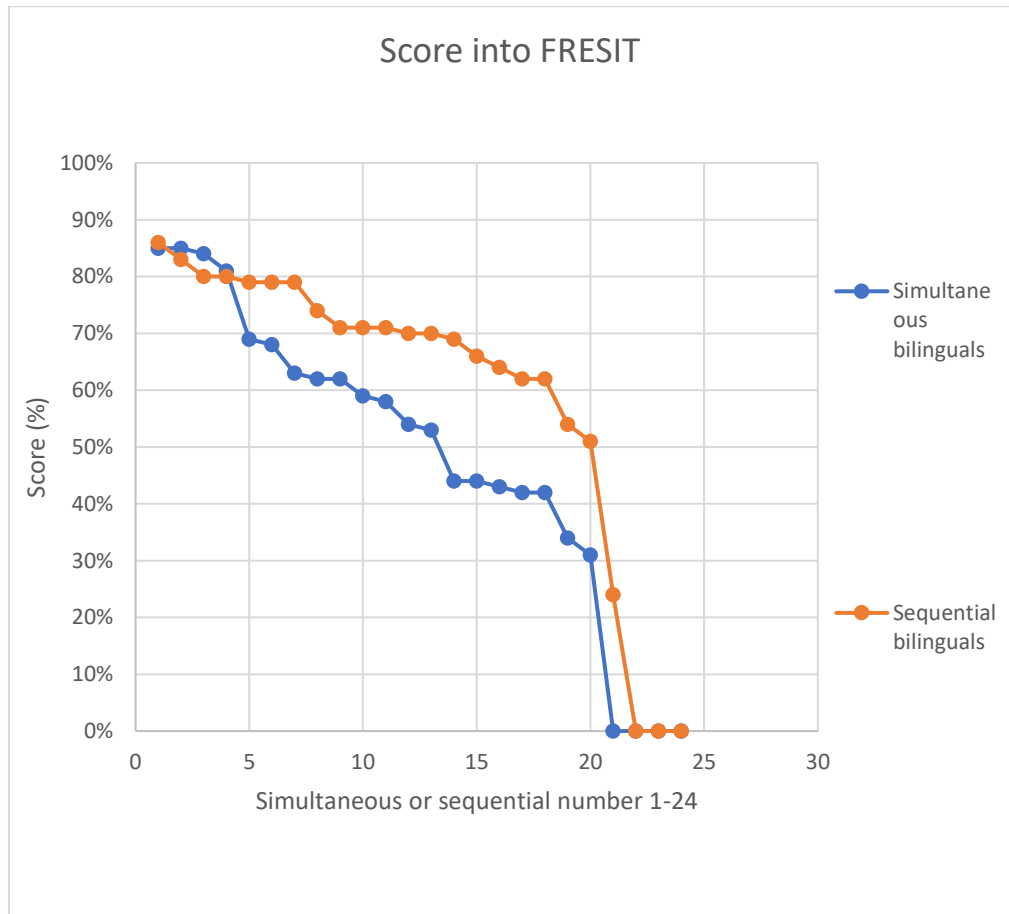
*Table 23: Raw scores percentage bands for task into English*

| Percentage bands | Number of participants (N=48) |
|------------------|-------------------------------|
| 0-9%             | 3                             |
| 11-20%           | 0                             |
| 21-30 %          | 0                             |
| 31-40 %          | 2                             |
| 41-50%           | 6                             |
| 51-60%           | 8                             |
| 61-70%           | 13                            |
| 71-80%           | 9                             |
| 81-90%           | 5                             |
| 91-100%          | 2                             |

#### **5.4.3 SI Task into FRESIT (French/Spanish/Italian)**

Figure 10 below plots the graph showing the distribution of scores for each group for the task where participants interpreted into FRESIT only. This is the task in which the sequential bilinguals outperformed the simultaneous bilinguals (by 60% to 48%). Compared with the SI task into English, the scores are slightly lower overall and the spread of scores is narrower, from 0 to 86% overall. The range for the simultaneous bilinguals is 0-85%, with four failures, and 0-86% for the sequential bilinguals, with three failures. This time, the top score was attained by a sequential bilingual. There were more failures in this task: four simultaneous and three sequential failed to reach the minimum threshold. Compared with the overall scores and the scores for the SI task into English, Figure 10 demonstrates both a narrower range of scores and lower scores for the task into FRESIT.

**Figure 10: Ranking of participants according to score (%) into FRESIT**



Turning to the percentage bands for the raw scores where participants interpreted into FRESIT, Table 24 below shows that 67% of participants scored over 51%. The average overall score was 54%. The band containing the highest number of participants is the 61-70% band.

**Table 24: Raw scores percentage bands for task into FRESIT**

| Percentage bands | Number of participants (N=48) |
|------------------|-------------------------------|
| 0-9%             | 7                             |
| 11-20%           | 0                             |
| 21-30 %          | 1                             |
| 31-40 %          | 2                             |
| 41-50%           | 5                             |
| 51-60%           | 6                             |
| 61-70%           | 11                            |
| 71-80%           | 9                             |
| 81-90%           | 6                             |
| 91-100%          | 0                             |

In sum, findings from the raw scores show that in the task into English, the simultaneous bilinguals outperformed the sequentials (by 61% to 60%). In the task into FRESIT, the sequentials outperformed the simultaneous (by 60% to 48%) and overall, the sequentials outperformed the simultaneous (by 60% to 55%).

### **5.5 SI Task Scores: Inferential Statistics**

This section details the inferential statistics used to determine if there was a statistical difference in the performances of the simultaneous and sequential bilinguals who took part in this study. The first part of this section discusses the results of the independent sample *t*-tests and Mann-Whitney U tests used to analyse the overall SI task scores. The second part examines the results of the independent sample *t*-tests and Mann-Whitney U tests used to analyse individual scores in each of the categories according to which participants were evaluated.

The average overall score showed that the sequential bilinguals (M=40.84, SD=15.38) outperformed the simultaneous bilinguals (M=35.02, SD=16.74) in both tasks together. The means and standard deviations of the overall score are presented in Table 25.

*Table 25: Mean and standard deviations of overall average score on both simultaneous interpreting tasks (by bilingual type)*

|  | Simultaneous bilinguals |       |                    | Sequential bilinguals |       |                    |
|--|-------------------------|-------|--------------------|-----------------------|-------|--------------------|
| Score**                                      | N                       | Mean  | Standard Deviation | N                     | Mean  | Standard Deviation |
| <b>Overall average score** on both tasks</b> | 24                      | 35.02 | 16.74              | 24                    | 40.84 | 15.38              |

\*\* This relates to the raw scores out of 70 and is not a percentage

However, this difference between the two bilingual groups could emerge due to chance variation or sampling error. To examine if the sequential bilinguals performed better than their simultaneous counterparts in the tasks, an independent samples *t*-test was performed. A normality check was carried out on the average overall score. The distribution of test scores was normally distributed (i.e., skewness statistics between -1 and 1) in the simultaneous group but was found to be skewed in the sequential group (-.127 in the simultaneous group and -.1588 in the sequential group). As a result, a Mann-Whitney U test was performed. The results showed no significance between the sequential bilinguals (Median=46.88) and the simultaneous bilinguals (Median=40.13) in terms of their overall average scores on both tasks taken together ( $U=224$   $p=0.187$ ).

### **5.5.1 Scores by Task**

To investigate further whether simultaneous bilinguals outperformed sequential bilinguals in either direction, each of the two tasks was examined individually. The raw scores showed that the simultaneous bilinguals ( $M=42.67$ ,  $SD=13.36$ ) outperformed the sequential bilinguals ( $M=41.98$ ,  $SD= 6.45$ ) in the interpreting task into English. However, the sequential group ( $M=42.15$ ,  $SD=18.57$ ) outperformed the simultaneous group ( $M=33.94$ ,  $SD=18.84$ ) in the task into FRESIT. The means and standard deviations of the test scores are presented in Table 26 and broken down by bilingual type.

**Table 26: Mean and standard deviations of average score of both simultaneous interpreting tasks, score into English and score into FRESIT (by bilingual type)**

| Score   | Simultaneous bilinguals |       |                    | Sequential bilinguals |       |                    |
|---|-------------------------|-------|--------------------|-----------------------|-------|--------------------|
|   | N                       | Mean  | Standard Deviation | N                     | Mean  | Standard Deviation |
| <b>Combined average of score into English and score into FRESIT</b> | 24                      | 38.30 | 13.45              | 24                    | 42.06 | 16.20              |
| <b>Simultaneous interpreting task into English</b>                  | 24                      | 42.67 | 13.36              | 24                    | 41.98 | 16.45              |
| <b>Simultaneous interpreting task into FRESIT</b>                   | 24                      | 33.94 | 18.84              | 24                    | 42.15 | 18.57              |

To determine if the sequential bilinguals performed better statistically than their simultaneous counterparts in both the individual tasks, independent samples *t*-tests were performed. A normality check was carried out and the distribution of test scores was found to be normally distributed (i.e., skewness statistics between -1 and 1) in the task into FRESIT. The test results were found to be skewed in the sequential group (-1.375) and in the simultaneous group (-1.161) in the task into English. Consequently, a Mann-Whitney U test was conducted. The results showed no significance between the sequential bilinguals (Median=43.50) and the simultaneous bilinguals (Median=46.25) in the SI task into English (U=269, p=0.695). However, significance was reported in the into FRESIT task. The sequential bilinguals (Median=49.00) outperformed the simultaneous bilinguals (Median=37.50) in the into FRESIT task (U=90, p=.043). A small effect, therefore, was found (r=-0.29).

In sum, the inferential statistics demonstrated that there was no significant difference between the simultaneous and sequential bilinguals in either the overall task scores or in the task into English. However, in the task into FRESIT, the sequential bilinguals outperformed the simultaneous bilinguals and a small effect was reported.

### **5.5.2 Performance in the Categories of the SI Task**

As part of the task evaluation process, participants who had rendered the interpreting task comprehensibly were scored according to 14 categories (see Appendix 2 for the SI assessment template). These categories were:

- Non-sequiturs
- Unfinished sentences
- Serious omissions
- Unjustified changes
- Unjustified additions
- Fillers
- Unnatural intonation
- Corrections
- How convincing they were as an interpreter
- Mispronunciations
- Grammatical mistakes
- Source language interference
- Accent
- Rendering of idiomatic language

Performance was examined in each of these categories, first into English and then into FRESIT, to determine if there was a statistical difference between the simultaneous group and the sequential group.

#### **5.5.2.1 Interpreting from FRESIT into English**

Table 27 below presents the means and standard deviations of the 14 test results/categories (FRESIT into English), broken down according to bilingual type (simultaneous or sequential).

*Table 27: Means, standard deviations and parametric test results (two samples independent t-tests) which examined the differences between the two bilingual groups (from FRESIT into English)*

|   | Mean                             |                                   | t-value      | Degree of freedom | p-value      |
|---|----------------------------------|-----------------------------------|--------------|-------------------|--------------|
|   | Simultaneous bilinguals          | Sequential bilinguals             |              |                   |              |
| <b>Serious omissions</b>                          | 2.83<br>(SD = 1.32)              | 3.15<br>(SD = 1.48)               | -.77         | 46                | .443         |
| <b>Unjustified changes</b>                        | 2.67<br>(SD = 1.27)              | 2.67<br>(SD = 1.37)               | .00          | 46                | 1.000        |
| <b>Fillers</b>                                    | 3.13<br>(SD = 1.44)              | 3.17<br>(SD = 1.47)               | -.099        | 46                | .921         |
| <b>Unnatural intonation</b>                       | 2.75<br>(SD = 1.23)              | 2.77<br>(SD = 1.36)               | -.056        | 46                | .956         |
| <b>Corrections</b>                                | <b>2.46</b><br><b>(SD = .99)</b> | <b>3.17</b><br><b>(SD = 1.37)</b> | <b>-2.05</b> | <b>46</b>         | <b>.046*</b> |
| <b>How convincing they were as an interpreter</b> | 2.21<br>(SD = 1.21)              | 2.69<br>(SD = 1.42)               | -1.26        | 46                | .214         |
| <b>Source language interference</b>               | 2.35<br>(SD = 1.27)              | 2.15<br>(SD = 1.09)               | .610         | 46                | .545         |
| <b>Rendering of idiomatic language</b>            | 2.60<br>(SD = 1.31)              | 2.48<br>(SD = 1.46)               | .312         | 46                | .757         |

\*t-test is significant at the 0.05 level (2-tailed).

\*\* t-test is significant at the 0.01 level (2-tailed).

The mean scores show that the sequential bilinguals outperformed their simultaneous counterparts in the following categories:

- non-sequiturs
- unfinished sentences
- serious omissions
- additions
- fillers
- unnatural intonation
- **corrections (p=0.046)**
- how convincing they were as an interpreter.



The simultaneous bilinguals outperformed their sequential counterparts in terms of:

- **mispronunciations (p=0.016)**
- grammatical mistakes
- source language interference
- **accent (p=0.00)**
- idiomatic rendering of language.

Both groups scored equally in the ‘unjustified changes’ category.

However, in each of the 14 cases above, these differences in the test scores could have been caused by sampling error. To investigate if there were statistical differences between the two bilingual groups, independent samples *t*-tests were performed. Normality checks were carried out on the data within each of the two groups. The results showed that 8 out of 14 variables (test results) passed the normality test (skewness between the range of -1 and 1). Therefore, these eight test results were compared using independent samples *t*-tests (see Table 27 for the test results) and six of the results were compared using Mann-Whitney U tests. Table 28 below demonstrates statistical difference was only found in ‘corrections’, which showed that the sequential bilinguals (M=3.17, SD=1.37) outperformed the simultaneous bilinguals (M=2.46, SD=0.99,  $t(46) = -2.05$ ,  $p=.046$ ). A small effect was found ( $r=0.28$ ).

Table 28 shows the means, medians, standard deviations and the Mann-Whitney test results of the six categories being compared. The results indicate that the simultaneous group outperformed the sequential group in terms of ‘mispronunciations’ into English (U=174,  $p=0.016$ ), where a moderate effect was found ( $r = -0.35$ ), and in terms of ‘accent’ into English (U=107,  $p=0.00$ ), where a large effect was found ( $r=-0.57$ ). The median score in the ‘mispronunciations’ category for the sequential group was 3.50 and the median score was 4.00 for the simultaneous group. In terms of the ‘accent’ category, the median score for the sequential group was 3.00, while it was 5.00 for the simultaneous group.

*Table 28: Means, standard deviations and non-parametric test results (Mann-Whitney U) which examined the differences between the two bilingual groups (from FRESIT into English)*

|                       | Mean                               |                                   | Median                  |                       | Mann-Whitney U | p-value       |
|-----------------------|------------------------------------|-----------------------------------|-------------------------|-----------------------|----------------|---------------|
|                       | Simultaneous Bilinguals            | Sequential Bilinguals             | Simultaneous Bilinguals | Sequential Bilinguals |                |               |
| Non-sequiturs         | 3.19<br>(SD = 1.41)                | 3.71<br>(SD = 1.49)               | 3.00                    | 4.00                  | 216            | .128          |
| Unfinished sentences  | 3.25<br>(SD = 1.43)                | 3.69<br>(SD = .53)                | 3.50                    | 4.00                  | 227            | .192          |
| Unjustified additions | 3.31<br>(SD = 1.37)                | 3.56<br>(SD = .31)                | 3.00                    | 4.00                  | 244            | .348          |
| Mispronunciations     | <b>4.04</b><br>(SD = <b>1.23</b> ) | <b>3.15</b><br>(SD = <b>.51</b> ) | <b>4.00</b>             | <b>3.50</b>           | <b>174</b>     | <b>.016*</b>  |
| Grammatical mistakes  | 3.33<br>(SD = 1.14)                | 2.81<br>(SD = .44)                | 3.75                    | 3.00                  | 222            | .160          |
| Accent                | <b>4.54</b><br>(SD = <b>1.17</b> ) | <b>2.83</b><br>(SD = <b>.53</b> ) | <b>5.00</b>             | <b>3.00</b>           | <b>107</b>     | <b>0.00**</b> |

\*test is significant at the 0.05 level (2-tailed)

\*\*test is significant at the 0.01 level (2-tailed)

### 5.5.2.2 Interpreting from English into FRESIT

This section turns to the results obtained from the interpreting task which took place in the other direction, from English into FRESIT. Table 29 below displays the means and standard deviations of the 14 test results (from English into FRESIT) broken down by types of bilinguals (simultaneous and sequential bilinguals). The mean scores demonstrate that the sequential bilinguals outperformed their simultaneous counterparts in 13 categories: non-sequiturs, unfinished sentences, serious omissions, interference, accent and idiomatic rendering. However, the simultaneous group did better than the sequential group

in one single category, the fillers category (see Table 29 for details). Independent samples *t*-tests were conducted to determine if these differences were statistically significant.

Normality checks were carried out on the data within each of the two groups. The results showed that all 14 variables (test results) passed the normality test (skewness between the range of -1 and 1) in the simultaneous group but six categories were skewed in the sequential group. Therefore, eight of the test results were compared using independent samples *t*-test (see Table 29 below). The test scores for non-sequiturs, unfinished sentences, unnatural intonation, corrections, mispronunciations, and accent, on the other hand, had skewness values of -1.30, -1.58, -1.11, -1.45, -1.56 and -1.52, respectively. This is regarded as violating the assumption of normality for independent samples *t*-tests, so the non-parametric equivalent of the test was performed.

**Table 29: Means, standard deviations and parametric test results (two samples independent *t*-tests) that examined the differences between the two bilingual groups (from English into FRESIT)**

|   | Mean                               |                                    | <i>t</i> -value | Degree of freedom | p-value       |
|---|------------------------------------|------------------------------------|-----------------|-------------------|---------------|
|   | Simultaneous bilinguals            | Sequential bilinguals              |                 |                   |               |
| <b>Serious omissions</b>                          | 2.46<br>(SD = 1.56)                | 2.69<br>(SD = 1.35)                | -.544           | 46                | .589          |
| <b>Unjustified changes</b>                        | 2.06<br>(SD = 1.39)                | 2.44<br>(SD = 1.27)                | -.974           | 46                | .335          |
| <b>Unjustified additions</b>                      | 2.63<br>(SD = 1.75)                | 2.81<br>(SD = 1.47)                | -.403           | 46                | .689          |
| <b>Fillers</b>                                    | 2.90<br>(SD = 1.62)                | 2.83<br>(SD = 1.40)                | .143            | 46                | .887          |
| <b>How convincing they were as an interpreter</b> | 2.23<br>(SD = 1.54)                | 2.60<br>(SD = 1.49)                | -.858           | 46                | .395          |
| <b>Grammatical mistakes</b>                       | <b>1.67</b><br>(SD = <b>1.33</b> ) | <b>2.81</b><br>(SD = <b>1.60</b> ) | <b>-2.70</b>    | <b>46</b>         | <b>.010**</b> |
| <b>Source language interference</b>               | 1.81<br>(SD = 1.25)                | 2.25<br>(SD = 1.28)                | -1.20           | 46                | .236          |
| <b>Rendering of idiomatic language</b>            | 1.94<br>(SD = 1.35)                | 2.65<br>(SD = 1.58)                | -1.67           | 46                | .102          |

\**t*-test is significant at the 0.05 level (2-tailed).

\*\* *t*-test is significant at the 0.01 level (2-tailed).

The eight independent samples *t*-tests reported in Table 29 show that statistical significance was only found in the ‘grammatical mistakes’ category ( $t(46)=-2.7$ ,  $p=-0.01$ ), where the sequential bilinguals ( $M=2.81$ ,  $SD=1.60$ ) outperformed the simultaneous bilinguals ( $M=1.67$ ,  $SD=1.33$ ). A moderate effect was found

( $r=0.36$ ). This means that the other categories in which one group outperformed the other was probably due to sampling error.

However, the Mann-Whitney U tests (see Table 30 below) found that there was a statistical difference between the simultaneous group (Median=2.75) and the sequential group (Median=4.00) in the 'corrections' category ( $U=170$ ,  $p=0.011$ ). The sequential group (Median=5.00) also outperformed the simultaneous group (Median=3.00) in the 'mispronunciations' category ( $U=166$ ,  $p=0.008$ ) and this was also the case in the 'accent' category ( $U=142$ ,  $p=0.002$ ), where the sequential group (Median=5.00) outperformed the simultaneous group (Median=3.00). A moderate effect was reported in all three categories ( $r=-0.37$ ;  $r=-0.38$ ;  $r=-0.45$ ).

*Table 30: Means, standard deviations and non-parametric test results (Mann-Whitney U) that examined the differences between the two bilingual groups (from English into FRESIT)*

|                             | Mean                       |                            | Median                  |                       | Mann-Whitney U | p-value       |
|-----------------------------|----------------------------|----------------------------|-------------------------|-----------------------|----------------|---------------|
|                             | Simultaneous bilinguals    | Sequential bilinguals      | Simultaneous bilinguals | Sequential bilinguals |                |               |
| <b>Non-sequiturs</b>        | 2.77<br>(SD = 1.69)        | 3.52<br>(SD = 1.65)        | 3.00                    | 4.00                  | 205            | .079          |
| <b>Unfinished sentences</b> | 2.70<br>(SD = 1.73)        | 3.40<br>(SD = 1.47)        | 2.75                    | 4.00                  | 216            | .126          |
| <b>Unnatural intonation</b> | 2.69<br>(SD = 1.55)        | 2.98<br>(SD = 1.43)        | 3.00                    | 3.50                  | 249            | .409          |
| <b>Corrections</b>          | <b>2.41</b><br>(SD = 1.45) | <b>3.35</b><br>(SD = 1.49) | <b>2.75</b>             | <b>4.00</b>           | <b>170</b>     | <b>.011*</b>  |
| <b>Mispronunciations</b>    | <b>2.88</b><br>(SD = 1.75) | <b>3.96</b><br>(SD = 1.83) | <b>3.00</b>             | <b>5.00</b>           | <b>166</b>     | <b>.008**</b> |
| <b>Accent</b>               | <b>2.79</b><br>(SD = 1.50) | <b>3.85</b><br>(SD = 1.77) | <b>3.00</b>             | <b>5.00</b>           | <b>142</b>     | <b>.002**</b> |

\*test is significant at the 0.05 level (2-tailed)

\*\*test is significant at the 0.01 level (2-tailed)

### 5.5.3 Summary of Quantitative Findings

This section summarises the analysis of the results from both the descriptive and the inferential statistics reported in the last two sections of this chapter. The raw scores demonstrated that the sequential bilinguals outperformed the simultaneous bilinguals: the overall average for the sequential bilinguals was 60%, compared with an overall average of 55% for the simultaneous bilinguals. The sequential bilinguals showed consistent results in both tests, scoring an average of 60% in each. The simultaneous bilinguals were less consistent, scoring an average of 61% in the test into English and an average of 48% into FRESIT. However, the inferential statistics showed that there was in fact no significant difference between the simultaneous and sequential bilinguals in

terms of their overall SI task scores or in the SI task into English. A statistical difference was found in the SI task into FRESIT, where the sequential bilinguals outperformed the simultaneous bilinguals. The inferential statistics applied to the 14 different categories in both SI directions found that the sequentials outperformed the simultaneous bilinguals in four categories into FRESIT, all with a moderate effect, and in one category into English, with a small effect. This was superior to the simultaneous bilinguals, who outperformed the sequential group in two categories, with one moderate and one large effect. This chapter now turns to findings related to participants' self-reporting of dominance in the questionnaire and their predictions during the Think-Aloud Protocols regarding their scores in both directions of interpreting.

## **5.6 Comparing Perceptions of Dominance and Directionality with SI Task Results**

This section first compares participants' perceived dominance, as ascertained from the Bilingual Language Questionnaire (see Appendix 1) (and in one case from the Think-Aloud Protocols), with their pre- and post-task predictions, before proceeding to compare participants' actual scores with their pre- and post-task predictions.

### **5.6.1 Participants' Predictions**

Directionality is used to indicate the direction – or language – into which participants interpreted. Participants either worked *into* English or *from* English into their other language (FRESIT). Six tables are provided below, which give a detailed presentation of participant perceived dominance and pre- and post-task predictions. As will be seen, three simultaneous bilinguals considered themselves to be balanced bilinguals. Twenty-seven participants, regardless of bilingual type, perceived English to be their dominant language, with FRESIT perceived to be their weaker language. Eighteen participants, also a combination of simultaneous and sequential bilinguals, perceived FRESIT to be their dominant language and English their weaker language.

The following six tables are organised from participant 1 (Sim1) to participant 48 (Seq24), the 24 simultaneous bilinguals followed by the 24 sequential participants, divided for ease of reading into groups of eight. The scores

represent the raw scores out of a maximum total of 70 points (not percentages). The first column gives the participants' perceived dominant language. Three participants declared themselves to be balanced bilinguals, and 27 of the remaining 45 considered their dominant language was English, 20 of them simultaneous and 7 of them sequential bilinguals. Eighteen participants perceived FRESIT to be their dominant language; one simultaneous and 17 sequential bilinguals. The second and third columns show their pre-task and then their post-task predictions, some of which have changed as a result of doing the tasks themselves. An asterisk in the third column marks a changed prediction. Two asterisks indicate a "not sure" answer, and three asterisks indicates the participant found "equal difficulty" in both tasks. The fourth column gives the score in the first task, into English, and the fifth column the score into FRESIT. The sixth and seventh columns show whether the participants' predictions pre-task and post-task were correct.



**Table 31: Perceived dominance and participant predictions for the French simultaneous bilingual group**

|             | 1<br>Perceived dominance | 2<br>Pre-task prediction | 3<br>Post-task prediction | 4<br>Score into English (max. 70) | 5<br>Score into FRESIT (max. 70) | 6<br>Pre-task prediction correct | 7<br>Post-task prediction correct |
|-------------|--------------------------|--------------------------|---------------------------|-----------------------------------|----------------------------------|----------------------------------|-----------------------------------|
| <b>Sim1</b> | English                  | French into English      | French into English       | 53.57                             | 31.43                            | Yes                              | Yes                               |
| <b>Sim2</b> | English                  | English into French      | English into French       | 65.00                             | 42.86                            | No                               | No                                |
| <b>Sim3</b> | English                  | French into English      | French into English       | 60.00                             | 57.86                            | Yes                              | Yes                               |
| <b>Sim4</b> | English                  | French into English      | French into English       | 62.15                             | 52.86                            | Yes                              | Yes                               |
| <b>Sim5</b> | English                  | French into English      | French into English       | 66.43                             | 80.72                            | No                               | No                                |
| <b>Sim6</b> | English                  | French into English      | French into English       | 50.77                             | 62.86                            | No                               | No                                |
| <b>Sim7</b> | English                  | English into French      | French into English*      | 0.00                              | 42.15                            | Yes                              | No                                |
| <b>Sim8</b> | English                  | English into French      | French into English*      | 44.29                             | 44.29                            | Equal score                      | Equal Score                       |

**Table 32: Perceived dominance and participant predictions for the Spanish simultaneous bilingual group**

|              | 1<br>Perceived dominance | 2<br>Pre-task prediction | 3<br>Post-task prediction | 4<br>Score into English (max. 70) | 5<br>Score into FRESIT (max. 70) | 6<br>Pre-task prediction correct | 7<br>Post-task prediction correct |
|--------------|--------------------------|--------------------------|---------------------------|-----------------------------------|----------------------------------|----------------------------------|-----------------------------------|
| <b>Sim9</b>  | English                  | Spanish into English     | Spanish into English      | 62.15                             | 0.00                             | Yes                              | Yes                               |
| <b>Sim10</b> | English                  | Spanish into English     | English into Spanish *    | 80.72                             | 85.00                            | No                               | Yes                               |
| <b>Sim11</b> | English                  | English into Spanish     | Not sure**                | 80.72                             | 67.86                            | No                               | -                                 |
| <b>Sim12</b> | Equal in both            | Spanish into English     | English into Spanish *    | 76.43                             | 59.29                            | Yes                              | No                                |
| <b>Sim13</b> | English                  | Spanish into English     | Spanish into English      | 79.29                             | 54.29                            | Yes                              | Yes                               |
| <b>Sim14</b> | English                  | Spanish into English     | Spanish into English      | 60.00                             | 0.00                             | Yes                              | Yes                               |
| <b>Sim15</b> | English                  | Spanish into English     | English into Spanish *    | 45.00                             | 0.00                             | Yes                              | No                                |
| <b>Sim16</b> | English                  | Spanish into English     | Spanish into English      | 62.15                             | 0.00                             | Yes                              | Yes                               |

**Table 33: Perceived dominance and participant predictions for the Italian simultaneous bilingual group**

|              | 1<br>Perceived dominance | 2<br>Pre-task prediction | 3<br>Post-task prediction | 4<br>Score into English (max. 70) | 5<br>Score into FRESIT (max. 70) | 6<br>Pre-task prediction correct | 7<br>Post-task prediction correct |
|--------------|--------------------------|--------------------------|---------------------------|-----------------------------------|----------------------------------|----------------------------------|-----------------------------------|
| <b>Sim17</b> | English                  | Italian into English     | Italian into English      | 73.58                             | 62.15                            | Yes                              | Yes                               |
| <b>Sim18</b> | English                  | English into Italian     | English into Italian      | 97.14                             | 85.00                            | No                               | No                                |
| <b>Sim19</b> | English                  | Italian into English     | Italian into English      | 41.43                             | 34.29                            | Yes                              | Yes                               |
| <b>Sim20</b> | English                  | Italian into English     | English into Italian*     | 69.98                             | 84.29                            | No                               | Yes                               |
| <b>Sim21</b> | Equal in both            | English into Italian     | English into Italian      | 48.57                             | 42.15                            | No                               | No                                |
| <b>Sim22</b> | English                  | English into Italian     | English into Italian      | 61.43                             | 62.15                            | Yes                              | Yes                               |
| <b>Sim23</b> | Italian                  | English into Italian     | Italian into English*     | 45.72                             | 68.57                            | Yes                              | No                                |
| <b>Sim24</b> | Equal in both            | Italian into English     | Italian into English      | 76.43                             | 43.58                            | Yes                              | Yes                               |

**Table 34: Perceived dominance and participant predictions for the French sequential bilingual group**

|             | 1<br>Perceived dominance | 2<br>Pre-task prediction | 3<br>Post-task prediction | 4<br>Score into English (max. 70) | 5<br>Score into FRESIT (max. 70) | 6<br>Pre-task prediction correct | 7<br>Post-task prediction correct |
|-------------|--------------------------|--------------------------|---------------------------|-----------------------------------|----------------------------------|----------------------------------|-----------------------------------|
| <b>Seq1</b> | French                   | English into French      | French into English*      | 32.86                             | 23.58                            | No                               | Yes                               |
| <b>Seq2</b> | French                   | English into French      | French into English *     | 51.43                             | 62.15                            | Yes                              | No                                |
| <b>Seq3</b> | French                   | English into French      | French into English *     | 52.86                             | 70.00                            | Yes                              | No                                |
| <b>Seq4</b> | French                   | English into French      | French into English *     | 85.00                             | 71.43                            | No                               | Yes                               |
| <b>Seq5</b> | English                  | English into French      | French into English *     | 48.57                             | 51.43                            | Yes                              | No                                |
| <b>Seq6</b> | English                  | French into English      | French into English       | 92.86                             | 79.29                            | Yes                              | Yes                               |
| <b>Seq7</b> | English                  | English into French      | French into English *     | 80.72                             | 85.71                            | Yes                              | No                                |
| <b>Seq8</b> | English                  | French into English      | English into French *     | 57.14                             | 54.29                            | Yes                              | No                                |

**Table 35: Perceived dominance and participant predictions for the Spanish sequential bilingual group**

|              | 1<br>Perceived dominance | 2<br>Pre-task prediction | 3<br>Post-task prediction | 4<br>Score into English (max. 70) | 5<br>Score into FRESIT (max. 70) | 6<br>Pre-task prediction correct | 7<br>Post-task prediction correct |
|--------------|--------------------------|--------------------------|---------------------------|-----------------------------------|----------------------------------|----------------------------------|-----------------------------------|
| <b>Seq9</b>  | Spanish                  | English into Spanish     | Spanish into English *    | 68.57                             | 63.57                            | No                               | Yes                               |
| <b>Seq10</b> | Spanish                  | English into Spanish     | Spanish into English *    | 72.15                             | 71.43                            | No                               | Yes                               |
| <b>Seq11</b> | English                  | Spanish into English     | English into Spanish *    | 0.00                              | 0.00                             | Failed overall                   | -                                 |
| <b>Seq12</b> | Spanish                  | English into Spanish     | Spanish into English *    | 72.86                             | 74.29                            | Yes                              | No                                |
| <b>Seq13</b> | Spanish                  | English into Spanish     | Spanish into English *    | 67.14                             | 80.00                            | Yes                              | No                                |
| <b>Seq14</b> | Spanish                  | Spanish into English     | Spanish into English      | 76.43                             | 70.00                            | Yes                              | Yes                               |
| <b>Seq15</b> | English                  | Spanish into English     | Spanish into English      | 75.00                             | 0.00                             | Yes                              | Yes                               |
| <b>Seq16</b> | Spanish                  | English into Spanish     | Spanish into English *    | 69.29                             | 62.15                            | No                               | Yes                               |

**Table 36: Perceived dominance and participant predictions for the Italian sequential bilingual group**

|               | 1<br>Perceived dominance | 2<br>Pre-task prediction | 3<br>Post-task prediction | 4<br>Score into English (max. 70) | 5<br>Score into FRESIT (max. 70) | 6<br>Pre-task prediction correct | 7<br>Post-task prediction correct |
|---------------|--------------------------|--------------------------|---------------------------|-----------------------------------|----------------------------------|----------------------------------|-----------------------------------|
| <b>Seq1 7</b> | Italian                  | English into Italian     | Italian into English *    | 64.29                             | 80.00                            | Yes                              | No                                |
| <b>Seq1 8</b> | Italian                  | English into Italian     | English into Italian      | 63.57                             | 78.57                            | Yes                              | Yes                               |
| <b>Seq1 9</b> | Italian                  | English into Italian     | Equal difficulty ***      | 51.43                             | 68.57                            | Yes                              | -                                 |
| <b>Seq2 0</b> | Italian                  | English into Italian     | Italian into English *    | 84.29                             | 82.86                            | No                               | Yes                               |
| <b>Seq2 1</b> | Italian                  | English into Italian     | English into Italian      | 65.00                             | 70.72                            | Yes                              | Yes                               |
| <b>Seq2 2</b> | English                  | Italian into English     | Italian into English      | 0.00                              | 0.00                             | Failed overall                   | Failed overall                    |
| <b>Seq2 3</b> | Italian                  | English into Italian     | English into Italian      | 70.72                             | 78.57                            | Yes                              | Yes                               |
| <b>Seq2 4</b> | Italian                  | English into Italian     | Not sure **               | 37.14                             | 66.43                            | Yes                              | -                                 |

### 5.6.1.1 Participant Perceived Dominance

These tables, as well as giving a detailed presentation of participant perceived dominance and pre-and post-task predictions, also allow for direct comparison of participant scores with pre- and post-task predictions.

Participants fell into one of three groups:

- 1) The three participants who perceived themselves as balanced bilinguals
- 2) those of the remaining 45 who expected to find it easier to interpret from their *perceived* weaker language into their *perceived* dominant language
- 3) those of the remaining 45 who expected to find it easier to interpret from

their *perceived* dominant language into their *perceived* weaker language.

Three participants, all simultaneous, perceived themselves to be balanced bilinguals and 27 of the remaining 45 considered their dominant language to be English (20 simultaneous and seven sequential bilinguals). Eighteen participants perceived FRESIT to be their dominant language; one simultaneous and 17 sequential bilinguals. Twenty-seven participants – 13 simultaneous and 14 sequentials – performed better interpreting into their dominant language from their weaker language (B-to-A). Fifteen participants – seven simultaneous and eight sequentials - performed better interpreting into their weaker language from their dominant language (A-to-B). Given that the number of simultaneous and sequential bilinguals appearing in both groups is almost identical, age of acquisition does not appear to have been a contributing factor in this sample in determining whether participants performed better into their weaker or their more dominant language. Six participants could not be taken into consideration as three perceived themselves to be balanced bilinguals, two failed and one participant obtained an identical score in each direction.

Below are the pre-task predictions on directionality provided by participants after the warm-up activity and before the SI task, followed by the totals of the post-task predictions provided by the participants immediately after completing both tasks. For clarity, participants are divided into self-perceived balanced (n=3) and self-perceived non-balanced (n=45) bilinguals as the balanced felt their dominance was equally matched in both languages. The three balanced bilinguals simply chose the language into which they thought they might perform best. Two of the balanced bilinguals predicted that they would perform better into English, and one into Italian. Table 37 below indicates the non-balanced participants' (n=45) pre-task predictions on directionality. Four-fifths of non-balanced bilinguals predicted that they would find it easier interpreting into their perceived dominant language.

**Table 37: Pre-task predictions on directionality by non-balanced bilingual group (n=45)**

| <b>Pre-task predictions</b>  | <b>Number of participants (n=45)</b> |
|--|--------------------------------------|
| Predicted it would be easier interpreting into <i>perceived</i> dominant language (B-to-A) | 36 (80%)                             |
| Predicted it would be easier interpreting into <i>perceived</i> weaker language (A-to-B)   | 9 (20%)                              |

Upon completion of the SI tasks, I asked participants if they wanted to amend their original predictions regarding the direction into which they felt they would perform best. Table 38 below shows changes in the post-task predictions.

**Table 38: Post-task predictions on directionality by non-balanced bilingual group (n=45)**

| <b>Post-task predictions (non-balanced)</b>   | <b>Number of participants (n=45)</b> |
|---|--------------------------------------|
| Felt they had performed better into their <i>perceived</i> dominant language (B-to-A) | 21 (47%)                             |
| Felt they had performed better into their <i>perceived</i> weaker language (A-to-B)   | 21 (47%)                             |
| No longer sure  | 2 (4%)                               |
| Reported equal difficulty in both directions  | 1 (2%)                               |

When Table 37 and Table 38 are compared, there is a decrease in the number of participants who felt they had performed better into their perceived dominant language (B-to-A), dropping 33% from 36 to 21 participants. By contrast, the number of participants who felt they had performed better into their perceived weaker (A-to-B) language rose 27%, from 9 to 21 participants. Two participants were no longer sure and one reported equal difficulty in both directions. In the balanced bilinguals group (n=3), one participant changed their prediction and the other two retained their original predictions.

### **5.6.1.2 Pre-and Post-Task Predictions Compared with Scores**

This section compares participants' predictions with their assessed performance in the SI task. All three balanced bilinguals predicted correctly pre-task the language into which they would perform better. The number of non-balanced bilinguals was therefore 45. However, for the purpose of the next comparison, the number of participants in the non-balanced group is 42 as one participant scored equally in both SI tasks and two participants failed both SI tasks. Table 39 below describes the correct and incorrect pre-task predictions in the non-balanced group.



### 5.6.2 Comparing Predictions and Performance

This section compares participants' predictions with their assessed performance in the SI task. All three balanced bilinguals predicted correctly pre-task the language into which they would perform better. The number of non-balanced bilinguals was therefore 45. However, for the purpose of the next comparison, the number of participants in the non-balanced group is 42 as one participant scored equally in both SI tasks and two participants failed both SI tasks. Table 39 below describes the correct and incorrect pre-task predictions in the non-balanced group.

*Table 39: Correct and incorrect pre-task predictions in the non-balanced group (n=42)*

| <b>Number of participants</b> | <b>Correct pre-task predictions (non-balanced)</b>                                | <b>Number of participants</b> | <b>Incorrect pre-task predictions (non-balanced)</b>                                |
|-------------------------------|---|-------------------------------|---|
| 24 out of 34 participants     | Correctly predicted would perform better into dominant language pre-task (B-to-A) | 10 out of 34 participants     | Incorrectly predicted would perform better into dominant language pre-task (B-to-A) |
| 5 out of 8 participants       | Correctly predicted would perform better into weaker language pre-task (A-to-B)   | 3 out of 8 participants       | Incorrectly predicted would perform better into weaker language pre-task (A-to-B)   |

Twenty-four of those who predicted pre-task that they would perform better into their dominant language were correct, 11 simultaneous and 13 sequentials. As a result, 10 were incorrect, four simultaneous and six sequentials. Five of those who predicted pre-task that they would perform better into their weaker language were correct, two simultaneous and three sequentials. Consequently, three were incorrect, all simultaneous bilinguals.

Table 40 below describes the correct and incorrect post-task predictions in the non-balanced group.

**Table 40: Correct post-task predictions in the non-balanced group (n=42)**

| <b>Correct post-task predictions (non-balanced)</b>                                | <b>Number of participants (n=42)</b> |
|--|--------------------------------------|
| Correctly predicted would perform better into dominant language post-task (B-to-A) | 14 out of 19 participants (74%)      |
| Correctly predicted would perform better into weaker language post-task (A-to-B)   | 10 out of 20 participants (50%)      |
| No longer sure   | 2 (5%)                               |
| Reported equal difficulty in both directions                                       | 1 (2%)                               |

Fourteen of the 19 participants who predicted post-task that they would perform better into their perceived dominant language were correct: nine simultaneous and five sequential. Ten of the 20 who predicted post-task that they would perform better into their perceived weaker language were correct: three simultaneous and seven sequential. Two were no longer sure: one simultaneous and one sequential. Lastly, one sequential reported equal difficulty in both directions. The three participants who responded that they were no longer sure or reported equal difficulty in both directions cannot be included in the following table so the number of non-balanced participants is reduced to 39. Table 41 shows incorrect post-task predictions in the non-balanced bilingual group.

**Table 41: Incorrect post-task predictions in the non-balanced group (n=39)**

| <b>Incorrect post-task predictions (non-balanced)</b>                                 | <b>Number of participants (n=39)</b> |
|---|--------------------------------------|
| Incorrectly predicted would perform better into dominant language post -task (B-to-A) | 5 out of 19 participants (26%)       |
| Incorrectly predicted would perform better into weaker language post -task (A-to-B)   | 10 out of 20 participants (50%)      |

Five of the 19 participants who predicted post-task that they would perform better into their perceived dominant language were incorrect: three simultaneous and two sequential. Ten of the 20 who predicted post-task that they would perform better into their perceived weaker language were incorrect: four simultaneous and six sequential. Twenty-two out of the total of 48 participants changed the prediction they made in the pre-task question: seven simultaneous and 15 sequential. One simultaneous participant scored equally in both SI tasks

and one sequential participant failed, therefore the number of participants whose changes can be deemed correct or incorrect post-task is 20. Eight of these were correct: two simultaneous and six sequentials, and 12 were incorrect: four simultaneous and eight sequentials.

The pre-task predictions were, therefore, closer to the actual scores. This, however, only tells part of the story. Comparison of the pre-task and post-task predictions along with juxtaposition of these predictions and the participants' actual scores shows that after taking part in the bi-directional tasks the participants were far from clear on how they had performed. Simultaneous and sequential bilinguals appear evenly distributed across all categories. Fourteen out of 23 (60%) simultaneous bilinguals (there was one simultaneous bilingual with equal scores in both tests) predicted correctly pre-task and a different 14 out of 23 (60%) predicted correctly post-task, giving an average of 60% correct predictions. Sixteen out of 22 (72%) of the sequentials (two sequentials failed both tasks) predicted correctly pre-task and 12 out of 22 (52%) predicted correctly post-task, giving an average of 62% correct predictions.

The sixth section of this chapter has looked at the issue of directionality from the point of view of comparing individual participant perceived dominance with pre- and post-task predictions. It has compared these pre- and post-task predictions with participant scores into and out of their dominant language. It has found that the pre-task predictions were more accurate than the post-task predictions. In other words, the participants embarked on the SI tasks with some pre-conceived ideas about directionality which were largely found to be borne out by their results. After doing the tasks in both directions, however, 22 out of 45 non-balanced participants changed their mind and only eight of them - two simultaneous and six sequentials - were found to be correct in doing so. The issue of directionality will be addressed again in Chapter 6 from a qualitative standpoint, when the perceived reasons for the predictions of the participants as expressed in the Think-Aloud Protocols are examined.

## **5.7 Conclusion**

This chapter has described the research population and the data collected both from the background questionnaire and from the results of the SI task. It has explored the descriptive statistics provided by the Language Background Questionnaire. A trend towards increasing use of English over FRESIT has been

noted in both the simultaneous and the sequential bilinguals. The chapter has also presented the quantitative findings of the research project: the descriptive statistics derived from participants' raw scores and their resulting rankings in the SI tasks, along with the inferential statistics employed to analyse both the overall SI task scores and the individual scores in each of the categories according to which participants were evaluated. It has recorded that the sequential bilinguals outperformed the simultaneous bilinguals by a small statistical margin in the SI task into FRESIT. The sequential bilinguals were also found to outperform the simultaneous bilinguals at category level. Finally, it has addressed the issue of directionality and compared individual participant perceived dominance with their pre-and post-task predictions. It has also in turn compared these pre- and post-task predictions with participant scores into and out of their dominant language. Chapter 6 turns now to the qualitative analysis of the two key themes to emerge from the Think-Aloud Protocols: The Bilingual Self and Language Storage, Retrieval and Access.



# Chapter 6: Qualitative Findings

## 6.1 Introduction

This chapter presents qualitative results obtained from the Think-Aloud Protocols (see text, Appendix 4). It contains three sections. First, a short section details the application of the coding procedure outlined in Chapter 4, which resulted in the emergence of two key themes: the Bilingual Self and Language Storage, Access and Retrieval. These two themes are examined in the two substantive sections of the chapter. Section Two investigates the theme entitled the Bilingual Self and its three sub-themes: (i) perceived bilingual identity which centred on degree of bilingualism, (ii) the nature of dominance and (iii) directionality. Section Three addresses the second key theme, Language Storage, Access and Retrieval. The final section concludes the chapter.

## 6.2. Themes Emerging from Nvivo Coding

The full list of first-round NVivo nodes is provided in Table 42 below, which shows that 23 themes emerged. I combined themes that could be brought together under one title and removed nodes with very few entries, entries where there was an element of overlap or duplication and entries where themes were not relevant to the research question. As a result, two final key themes and five sub-themes emerged. The first key theme was the Bilingual Self; how the participants saw themselves theoretically as competent or not competent in bilingual terms to perform the SI tasks. Three sub-themes are detected here: perceived bilingual identity centring on degree of bilingualism, the nature of dominance and, lastly, directionality. These sub-themes will be presented separately. The second key theme was Language Storage, Access and Retrieval, which relates to how the participants viewed the relationship between and the management of their two languages with specific reference to SI activity. Within this key theme two sub-themes emerged: first, language storage location and secondly, ease or difficulty of access and retrieval, both of which contain several components. These components emerged so intricately interwoven that they will be dealt with under one key-theme heading: Language Storage, Access and Retrieval. The key themes, sub-themes and constituent components are outlined in Table 43 below.

*Table 42: Themes emerging from first cycle of coding*

| <b>NVivo node</b>   | <b>Number of references</b> |
|---|-----------------------------|
| Ageing  | 5                           |
| Attrition   | 13                          |
| Automaticity  | 12                          |
| Balanced bilingualism   | 9                           |
| Directionality  | 83                          |
| British English vs American English and Castilian vs South American Spanish | 6                           |
| Did the experience match your predictions?                                  | 46                          |
| Did you feel any differently compared to before?                            | 48                          |
| Difficulties  | 49                          |
| Dominance   | 38                          |
| Interpreting gets easier with practice                                      | 48                          |
| Finding words   | 26                          |
| Fit   | 1                           |
| Identity  | 3                           |
| Language usage  | 42                          |
| Participant understanding of interpreting                                   | 3                           |
| Perfectionism   | 32                          |
| Pre-expectations  | 49                          |
| Pre-task feelings   | 46                          |
| Safe setting  | 5                           |
| Storage   | 37                          |
| Strengths   | 44                          |
| Swearing and taboo language   | 2                           |

*Table 43: Key themes and sub-themes in this research project*

| Key Themes | The Bilingual Self                                      | Language Storage, Access and Retrieval  |
|------------|---|---|
| Sub-theme  | Perceived bilingual identity/<br>Degree of bilingualism | Storage location  |
| Sub-theme  | Nature of Dominance                                     | Access/retrieval<br>Ease or difficulty dependent on<br><ul style="list-style-type: none"> <li>- Current usage/location</li> <li>- Memory</li> <li>- Coding/decoding</li> <li>- Domain/Interlocutor</li> <li>- Ageing</li> <li>- Attrition</li> <li>- Proficiency/Dominance</li> </ul> |
|            | Directionality  |   |

### **6.3 Key Theme 1: The Bilingual Self**

The two phases of the Think-Aloud Protocols led participants to reflect on aspects of their bilingual identity which, as ‘regular bilinguals’ (Grosjean 1997: 168), they might not have had occasion to explore before experiencing the simulated SI task. This self-examination heightened their perceptions of ‘how bilingual’ they believed themselves to be and therefore how efficiently they felt they would carry out the tasks. They expressed the challenge presented by the SI tasks in terms of, first, their degree of bilingualism and, secondly, the construct of language dominance within their personal profile. In articulating these two sub-themes, the participants expressed the factors which they perceived contributed to their unique bilingual identity.

#### **6.3.1 Sub-Theme 1: Degree of Bilingualism**

Twenty participants highlighted the sense of anxiety which they felt as they approached the challenge of the tasks. As they attempted to define their bilingual identity they touched on the expectations they felt were contained within this, highlighting negative connotations which they associated with being bilingual. These 20 participants were equally divided into ten simultaneous and ten sequential bilinguals and ranged across the scoresheet, from the top scorer to one of the candidates who failed overall. The following comments give an idea of the feelings expressed, particularly the recurring emphasis on perfectionism.



Percentage result and ranking out of 48 are added under participant reference number for comparison purposes and key phrases are rendered in bold type.

*Table 44: Bilingual language ability and perfectionism*

| Participant                     |  |
|---------------------------------|--|
| Seq3<br>61% / 24 <sup>th</sup>  | It <b>won't be perfect</b> so it's probably more challenging for me to translate from French to English (...) I would love to <b>do well</b> (...) You <b>want to make sure you got it right</b> .   |
| Sim3<br>59% / 27 <sup>th</sup>  | Into French was <b>not perfect</b> . I expected my translations particularly into French to be better than that but overall, I'm fairly happy. The <b>perfectionist</b> in me let's say in languages is <b>unhappy</b> . I think it was more trying to <b>look for perfectionism</b> rather than anything else. The way I look at it is that because I'm bilingual I <b>expect myself to be near-perfect</b> . |
| Sim19<br>8% / 39 <sup>th</sup>  | I generally get kind of <b>flustered</b> with that kind of thing so I <b>wasn't expecting it to be perfect</b> (...) It's exciting, especially with my brother coming in. There's a <b>bit of competition</b> now!   |
| Sim18 91% / 1 <sup>st</sup>     | I'm a bit of a <b>perfectionist</b> and I <b>want to get it right!</b>   |
| Sim10<br>83% / 5 <sup>th</sup>  | I <b>don't like making mistakes</b> so I could already feel myself in the second one thinking 'Oh no, that's wrong!' so presumably that will come through as well. I'm a <b>bit of a perfectionist</b> .   |
| Sim4<br>58% / 28 <sup>th</sup>  | It sounds like it should be fun but I'm still a <b>little bit worried about how well</b> I will do!  |
| Seq12<br>74% / 11 <sup>th</sup> | I was just trying to make myself think 'If I don't do it right then whatever' but I <b>really wanted to do this</b> and I <b>really wanted to do it well</b> .   |
| Seq20<br>84% / 3 <sup>rd</sup>  | I'm <b>afraid to fail</b> at words in English.   |
| Seq18<br>71% / 16 <sup>th</sup> | I <b>don't think I was nervous</b> during the tests but I <b>wanted to be able to do well</b> in them.   |

As the same number of simultaneous and sequential participants reported feelings of anxiety relating to the SI task, AoA was not deemed to be a decisive factor.

Both the simultaneous and the sequential participants felt the strain on their personal bilingual identity in the immediate context of the SI tasks and both reported a desire to prove themselves capable of a good performance. Three further participants felt that they would not in fact class themselves as bilingual, which they understood to mean either having equal proficiency in both languages or having an instinctual feel for both.

*Table 45: Sense of not being a true bilingual*

| Participant                                |   |
|--|---|
| Seq7 English<br>83% / 4 <sup>th</sup>      | I <b>wouldn't say I'm bilingual</b> ; I would have thought if I was bilingual I would have done that better. I wouldn't say I'm bilingual in the sense that you're always learning your own language as well but I am constantly learning new stuff in French.  |
| Sim19<br>English<br>38% / 39 <sup>th</sup> | When I was younger I felt more bilingual in both because I would spend my whole summers in Italy so out of instinct I would speak Italian. Since the age of 16 I haven't been going to Italy as much so it's definitely getting a bit lax now. Definitely native English speaker with Italian, <b>rather than 100% bilingual</b> .  |
| Sim15<br>English<br>23% / 45 <sup>th</sup> | I <b>wouldn't say I'm bilingual bilingual</b> but my mum is Spanish and my dad is Irish. My older sisters would have been fully bilingual but I always answered in English (...) I have lost a lot of Spanish (...) I don't think I have the level of Spanish to be able to translate simultaneously (...) If I was to compare myself to someone like me I would think I was actually doing quite well but when I compare myself to <b>real bilinguals</b> then I don't feel very good. |

One of these three bilinguals was a sequential bilingual who was aware of the gap between her levels of proficiency. The other two were simultaneous bilinguals, for whom acquiring two languages from birth did not automatically confer a sense of authentic bilingualism. Sim19 contrasts an earlier stage in her life when she felt 'more bilingual'. One further participant, Sim20, who had stated that English was her dominant language and who obtained an overall score of 77% (7<sup>th</sup> place), articulated clearly the difficulty she had defining bilingualism in general and her degree of bilingualism in particular:

English would be my first language. Italian would be my native tongue but English would be my first language: the language in which I think; the language I would feel most at ease in. **I am fully bilingual, although I don't feel there is any real, true bilingualism.** There is one dominant language and one weaker, recessive language. A bit like with genes.

For Sim20, the issue hinges on the balance between the bilingual's two languages and since she feels there cannot be a true balance within each individual bilingual there cannot therefore be a true bilingualism. Only three out of the total of 48 participants, all simultaneous bilinguals, described themselves as balanced bilinguals, without using the term 'balanced' but using the term 'same' or 'equal':

**Table 46: Nuanced balance in the self-perceived balanced bilinguals**

| Participant                            |  |
|--|--|
| <b>Sim21</b><br>45% / 36 <sup>th</sup> | I feel like my languages are <b>at the same level</b> but sometimes I find it easier to say things in English. I'm always in college speaking with English speakers so it would be rare for me to find other Italian people to talk to, which means that sometimes specific words won't come to me in Italian.   |
| <b>Sim24</b><br>60% / 25 <sup>th</sup> | I would feel that my languages are on the <b>same level now</b> as I've spent an <b>equal amount of time</b> living in Ireland and in Italy. I would consider my Italian to be my first language, just because I was born there and it's more ingrained in me.   |
| <b>Sim12</b><br>68% / 17 <sup>th</sup> | When it comes to work-related things, English is my dominant language, for sure, even if I studied my degree in Spanish. Then, when it comes to expressing ideas or really personal things in English, I tend to put too much sh*t in there (...) using all of these 'like' and 'you know' and all that nonsense. In Spanish, we are a lot more passionate, I think! A lot more straight to the point. So, for formal communication or corporate or work-related things I feel like I'm really good in English and when it comes to personal things and deep conversations I feel more dominant in Spanish. Most of my life I have read in English so when it comes to reading I feel that because I lived in the US I feel like my vocabulary is lacking in Spanish. When it comes to poetry, in English it means nothing to me and in Spanish it does. I feel really <b>bipolar!</b> So, dominance, I wouldn't be able to tell you which language is my dominant language. <b>They are exactly equal.</b> Because I lived in the US in very important years of my life, it's had an effect. I have nine siblings and the older ones have incredible English. One of them is more Irish than she is Spanish. Then the younger ones have a much lower English level than the others. You can see how it affected the language of each person at different stages in their life. For me, those four years in the US are totally key for my <i>bilingüismo</i> ... bilingualism. |

All of these participants, however, nuanced the sense of balance to differing degrees. Sim21 noted lexical attrition in one language as a result of living in the country where the other was spoken. Sim24 felt that the language of the country she was born in was 'ingrained' in her in a way the other language was not. Sim 12 reported those domains and registers in which one language comes more naturally to her and also the effect of living in different countries on her overall language profile.

In sum, the Think-Aloud Protocols in the context of the SI tasks showed first the participants' concern to perform well and an awareness on their part of the issue of balance, which in turn provoked reflections on their perceived degree of bilingualism and, consequently, the nature of bilingualism itself. This leads to a closer examination, in the next section, of those participants who discussed their

sense of being non-balanced bilinguals and therefore having clear dominance in one of their languages.

### **6.3.2 Sub-Theme 2: Language Dominance**

As presented in Chapter 5, almost all the sample group (45 out of the 48 participants – 24 sequentials and 21 simultaneous bilinguals) described themselves as non-balanced bilinguals. In that context their dominance was discussed with regard to their predictions as to how easy or how difficult they felt interpreting would be into their perceived dominant or perceived weaker language. In this chapter, the emphasis is on how the bilingual participants accounted for their current non-balanced profile. As will be seen below, they attributed this to a number of factors which centred first on historic and current language usage, secondly, on how they acquired their two languages and, thirdly, on current country of residence or frequency of travel to the country where their other language is spoken. For clarity, in each table below, the participants' reference number in the first column is followed by the language they indicated was their dominant language.

The theme of current language usage includes the domains of home, workplace/place of study, interlocutor, language of education and register. The domains of home and workplace/place of study are interrelated in complex ways and to different degrees with interlocutor. For some participants, both simultaneous and sequential, home is the only or principal place one of their languages is spoken:

*Table 47: Current language usage: domain - home*

| Participant      |   |
|------------------|---|
| Seq3<br>French   | It's now four years that I'm a stay-at-home mum so I <b>only speak French at home, Italian with my husband</b> and [English] <b>only really when I have the pleasure to meet people!</b>  |
| Seq4<br>French   | I met my husband in France and he taught French so <b>our relationship was always in French</b> . At home, I would speak to him in French and the <b>languages at home would be both</b> [French and English] (...) I <b>teach French here</b> but I haven't for the past three years so the <b>French I would speak would be at home</b> . |
| Seq24<br>Italian | At home I <b>speak Italian</b> and in the office I <b>speak both</b> . With the <b>general public I speak English</b> and <b>with my colleagues I speak Italian</b> so it's a <b>mix</b> . I swap into and out of languages all day. If there are not a lot of people coming in I will speak Italian.                                       |
| Sim9<br>English  | [M]um is Spanish and she would always have <b>spoken to us in Spanish</b> and <b>we would always answer in English!</b> We never really speak Spanish unless we have to or we have an exam on the Monday and it's Saturday night and we <b>realise that we need to practise!</b>  |
| Sim11<br>English | We <b>speak Spanish when we are together to make up for the fact that we are in Ireland</b> . [studies in English in Ireland]   |

For some participants, language use is more closely associated with a particular interlocutor, usually a parent or sibling:

Table 48: Current language usage: interlocutor

| Participant       |  |
|-------------------|--|
| Sim24<br>Balanced | I associate speaking <b>English to my mum</b> and <b>Italian to my dad</b> and I would <b>never swap</b> that: I would never speak English to my father and Italian to my mother <b>would always be weird</b> to me and that's how it's always been.   |
| Seq15<br>English  | If I am talking to my <b>older sister or a close friend</b> , I often find that <b>both languages</b> are present in the conversation and we use them freely without any limits or boundaries. However, if I am talking to my <b>mom</b> , I am always in <b>Spanish-mode</b> , even if I forget certain words because I know she would not understand me in English, and I have never communicated with her in the English language. The same goes for my <b>dad, any elderly member of my extended family</b> or when talking to <b>a stranger back home</b> . So, for me, I would say it <b>depends on the person and context</b> . |
| Sim11<br>English  | At home, I speak <b>Spanish to my mother</b> and <b>English to my father</b> .   |
| Sim14<br>English  | I would have spoken it [ <b>Spanish</b> ] <b>a lot more under the age of 24 because I lived at home</b> but as I don't live at home now I speak it maybe <b>twice a week with my mum</b> when I'm there.   |
| Sim15<br>English  | My <b>mum has always spoken to me in Spanish</b> but <b>very colloquially</b> . I've <b>always responded in English</b> .  |
| Sim16<br>English  | I <b>never speak to my mother in Spanish</b> because we've got to where we talk in English and <b>even if I talk to her in Spanish she'll answer me in English</b> .   |
| Sim20<br>English  | My <b>siblings</b> had the same upbringing as me and <b>we always speak English with each other</b> . My parents will go back and forth between English and Italian but it's <b>instinctive for us to speak in English with each other</b> , although we are children of Italians and have perfect Italian. It's instinctual.  |
| Seq15<br>English  | If I am talking to my <b>mom</b> , I am always in <b>Spanish-mode</b> , even if I forget certain words, because I know she would not understand me in English, and I <b>have never communicated with her in the English language</b> .   |

For other participants, both simultaneous and sequential, their languages are split between home and work but the split is not always clear-cut:

*Table 49: Current language usage: home and/or work*

| Participant      |  |
|------------------|--|
| Seq23<br>Italian | I work half-and-half in English and Italian but perhaps slightly more in Italian than in English. I speak Italian at home.   |
| Sim20<br>English | It's instinctive for us to speak in English with each other, although we are children of Italians and have perfect Italian. It's instinctual. I do work from English into Italian all the time in my employment. |
| Seq1<br>French   | As a French teacher you work a lot through French, obviously [implied also through English] (...) My husband is also very hard on me so every time I make a mistake he corrects me in English. [at home]         |
| Sim3<br>English  | I will do my best not to slip back into the term which is called Franglais (...) I'm notorious for it in work.   |
| Sim8<br>English  | I work as a tour guide in both English and French. I would tend to use English a lot more, with French being used maybe 20% of the day. [Speaks English at home]   |

Some participants, all simultaneous bilinguals, emphasise the different ways in which they acquired their two languages, whether by oral immersion or direct schooling. For example, Table 50 below shows a contrast between immersion at home and direct schooling in class:

*Table 50: Current language usage: home or schooling*

| Participant       |  |
|-------------------|--|
| Sim1<br>English   | I use English more often in school. The English we write in our Leaving Cert is much harder than the French I'd write in my French.  |
| Sim21<br>Balanced | I was born in Italy and I came here when I was two so I didn't do any schooling in Italy. I did my studies in Ireland. My parents have always spoken to me and my siblings in Italian and I would have developed my English through school.  |
| Sim22<br>English  | From birth my mum would speak to me in Italian and every summer and sometimes in the winter we would go down to Italy to visit my mum's family. I would speak solely in Italian with them. I would interchange between English and Italian but mainly I would speak Italian. My learning of Italian was entirely oral and I learned it the same way I learned to speak English: like a sponge. |

Those participants educated solely in one language (all simultaneous bilinguals) are aware of how that language has outstripped the other in relation to academic register and in particular grammatical accuracy:

Table 51: Current language usage: greater accuracy in language of education

| Participant      |  |
|------------------|--|
| Sim7<br>English  | I do most of my <b>work in English</b> in school and the French I would have would be <b>familial French</b> . I do do <b>French in school</b> but once again it's so different to when you do actually go to France.  |
| Sim23<br>Italian | I've <b>studied here</b> and I've <b>forgotten all the technical terms in Italian</b> so when I have to speak about <b>my topic in Italy for me it's tough</b> . It's better if I actually talk in English.  |
| Sim22<br>English | <p>My learning of <b>Italian was entirely oral</b> and I learned it the same way I learned to speak English: like a sponge. It was <b>never</b> like sitting down in a classroom and <b>learning grammar</b>. If you asked me to <b>write in Italian I would struggle</b> but I've <b>never had too much of a problem when speaking</b>. Certain things in Italian make sense in Italian but don't make sense in English so I would almost be translating from the Italian, asking myself how you say that in English.</p> <p>I think in my interpretations what would be noted is that - grammatically speaking - you could compare somebody like me who <b>absorbed it as a young child with somebody who studied it for the majority of their adult life from the age of 16 to 24</b>, for example. I'd imagine that <b>their interpretation would be more grammatically correct</b> without them having to put in the <b>extra effort</b> that I would have to if I was trying to use of <b>correct tenses</b>. <b>With the into Italian I wasn't as worried about what was correct and what was incorrect because I was working with an innate thing, a sense of feel</b>: if it felt right then I said it, whereas going from Italian to English - because I studied English and because I went through the stress of the Leaving Cert - <b>I naturally went to the more analytical</b>, asking myself if it was good. <b>With the Italian I didn't care; I was just doing it.</b></p> |
| Sim1<br>English  | I'll be <b>more accurate going from French into English</b> because I have a bit more of a higher standard. I use English more often in school. <b>The English we write in our Leaving Cert is much harder than the French I'd write in my French.</b>   |
| Seq4<br>French   | I think it's <b>also through which language people have been schooled</b> . I know - talking of my own son - his general French conversation is fine if you put him with a bunch of French 25-year-olds, <b>some of them won't notice that he's not really a French native speaker</b> . I think if you <b>bring the language level to a higher level he would struggle</b> .  |
| Seq1<br>French   | I do know that my <b>accurate</b> [sic] regarding the language is <b>not up to scratch in English</b> .  |

For some participants, both simultaneous and sequential, the topics that they studied or the topics they are involved with at work influence their proficiency or ease of communication in the respective languages:



Table 52: Language usage: different languages for different topics

|                          |  |
|--------------------------|--|
| <b>Participant</b>       |  |
| <b>Seq4<br/>French</b>   | If I'm talking about things to do with <b>work</b> , all of that would be <b>through English</b> because that's what I'm reading so <b>on some topics English is the dominant language but on others French might be</b> .   |
| <b>Sim6<br/>English</b>  | I was living in France and I only just got back in March so I think if the topic had been Economics I might have been just as comfortable into French because I <b>studied Economics in French but in most things I think I would be more comfortable into English</b> .   |
| <b>Sim8<br/>English</b>  | I work as a tour guide in both English and French so, although I had to learn a script, I would be <b>very used to conversing on the topic that I speak about in work in French</b> . I'm <b>perfectly comfortable with all topics in English</b> .  |
| <b>Sim23<br/>Italian</b> | I've <b>studied here</b> and I've <b>forgotten all the technical terms in Italian</b> so when I have to speak about <b>my topic in Italy for me it's tough</b> . It's <b>better if I actually talk in English</b> .  |
| <b>Seq11<br/>English</b> | I did it as a career choice to speak Spanish so I <b>don't have much knowledge in world vocabulary</b> . I <b>wouldn't know how to say certain things if they don't come up in a classroom setting</b> , especially if they're <b>words that don't get used very often</b> .   |
| <b>Sim16<br/>English</b> | I'm going to <b>struggle with any formal language and any less colloquial terms</b> because my Spanish has solely come about as a result of interaction with people, as opposed to reading in Spanish. <b>I don't do much reading in Spanish; I don't read articles in Spanish</b> . My <b>formal, reporting language in Spanish would be nowhere near as good as it is in English</b> . |
| <b>Sim2<br/>English</b>  | <b>Formal French</b> is completely different to <b>colloquial French</b> . Completely different. I can't. I <b>can barely read a newspaper article in French</b> because it's completely (...) it's all over the shop.   |
| <b>Seq11<br/>English</b> | I <b>wouldn't know how to say certain things if they don't come up in a classroom setting</b> , especially if they're <b>words that don't get used very often</b> .  |

Similarly, Sim12 uses one language for formal and work-related topics and the other language to communicate personal matters and notes the particular characteristics of each language as she perceives it which makes them more appropriate for how she wishes to express herself:

I'm in contact with customers and I can express myself in a **formal** way in English without being too pompous. **I'm much better in English because with Spanish you're either formal or you're informal and it's really hard to find a middle ground but English is very good in that sense**. Then, when it comes to expressing **ideas or really personal things in English**, I tend to put too much sh\*t in there but that's just because in English you do just put too much shit in there, using all of these 'like' and 'you know' and all that nonsense. **In Spanish, we are a lot more passionate**, I think! [...] For me, those four years in the US are totally key for my *bilingüismo*... bilingualism. There are some words that just sound like they should be said in Spanish and not in English! *Bilingüismo* is just so clear!

Although Sim14 is capable of speaking about both day-to-day matters and more academic topics in Spanish, she finds that it takes longer for her to access them in that language as it is the language she uses less frequently:

The way I speak Spanish would reflect the things people talk to their mum about so a lot of other topics, like political subjects, *lo puedo hablar y sé como hablar de cosas políticas pero* [**I can talk about them and I know how to speak about political things but**] I've found that a lot of the *vocabulario* [vocabulary] wouldn't be at the front of my head *pero está aquí atrás* [but it's here behind] and then once I start talking about it, it comes up. It takes a day or two for the **higher-level words** to come forward. **On a day-to-day basis my vocabulary and Spanish would be at the level of talking to your mum** and then at the higher level *cosas un poco más académicas* [**more academic things**] they'd be at the back, *me cuestan un poquito más, si me entiendes?* [they're a **bit harder for me**, if you catch my drift?]

The country of residence (Ireland in the case of this research) plays a defining role in current dominance but the effect of frequency or length of stays abroad in the other country where the bilingual's language is spoken may have short-term beneficial influence on proficiency in the other language. One participant only, Sim14, speaks Spanish occasionally either with her mother when she visits her in Ireland or with her Spanish family when she is in Spain:

When I was little mum tried to give us the odd Spanish class but we never had any interest in it. I would have spoken it a lot more under the age of 24 because I lived at home but as I don't live at home now I speak it **maybe twice a week with my mum** when I'm there. I have my cousins *y eso cuando estoy en España* [and **when I'm in Spain**] and I will talk to them a lot as well.

Three participants, all simultaneous bilinguals, noted that they felt they would have performed better in the SI tasks in both of their languages had they been speaking them recently or at a different time in their lives, the latter again indicating an awareness of a changing language profile:

*Table 53: Recency of language use*

| Participant                    |   |
|--------------------------------|---|
| <b>Sim14</b><br><b>English</b> | If you had been asking me the questions in Spanish I would've done way better in Spanish or it would at least have matched the English. It was probably because of <b>my brain</b> . I don't think I'm going to be particularly good at anything! I thought to begin with that it would be easier to translate into English. Actually, I think it's going to be easier to translate into Spanish as I think the English speaker is going to be much slower. I think I'm going to be better translating into Spanish because of the speed of the language and I am going to be good at getting the message across, not necessarily translating the words one by one... <b>I wasn't tuned into the Spanish</b> as much as the English because I've been speaking English all morning. Maybe if I'd been speaking with my mum this morning would have been a bit easier. |
| <b>Sim17</b><br><b>Italian</b> | I think if I did this back <b>when my Italian was at its best</b> then potentially they would be more equal than I thought but here going into it I just had the core vocabulary. The vocabulary and the grammatical structures are rusty so just pulling them out was tough enough.  |
| <b>Sim10</b><br><b>English</b> | <b>If we were having this conversation when I was living in Madrid</b> the languages would have been virtually equal. I've been back here four years now so you naturally lose a little bit of it.  |

The group of factors affecting dominance which have been discussed in this section result in the participants' perception that they are operating in a specific 'environment' (Sim3), 'mode' (Seq15, Sim4, Sim14) or 'zone' (Sim5) for each of their languages (see Table 54 below):

Table 54: Language mode

| Participant      |   |
|------------------|---|
| Sim3<br>English  | Professionally, now it's more of a <b>French-speaking environment</b> . At the end of the day I'm still battling 24 years of schooling in English so English is my dominant language.   |
| Sim4<br>English  | My girlfriend is always asking me how to say something in French and I won't know. Because we speak in English sometimes I try to speak French to her for a minute or two and see if it will trigger something. Generally, it doesn't work; I still can't find it but I know I know the word. I can never find it. That's my <b>English-speaking mode</b> . I'm using English more often so I can access it faster.   |
| Seq15<br>English | <b>If I am talking to my older sister or a close friend, I often find that both languages are present</b> in the conversation and we use them freely without any limits or boundaries. However, if I am talking to my mom, I am always in <b>Spanish-mode</b> , even if I forget certain words, because I know she would not understand me in English, and I have never communicated with her in the English language. The same goes for my dad, any elderly member of my extended family, or when talking to a stranger back home. So, for me, I would say it depends on the person and context. |
| Sim14<br>English | I want to make sure I get the Spanish vocabulary. I know it's all in there it's just getting the word in time because I know I have it but it's frustrating when you can't access it immediately. I have to get into <i>el modo de hablar español</i> . <i>Como hablo inglés todo el día y luego tengo que cambiar el cerebro o cambiar la mente para hablar en español pero yo creo que ya me irá bien!</i> [ <b>Spanish mode</b> . I'm speaking English all day so I have to change language hats or mindsets so I can speak Spanish but I think it'll go well!]                                |

Seq15, a sequential bilingual, is the only participant to identify a strictly bilingual mode. She defines it as when both languages are present in a conversation and 'we use them freely without any limits or boundaries'. Such a bilingual mode was not reported by any of the simultaneous bilinguals.

To summarise, language dominance was perceived by the participants as the key constituent in their bilingual identity as 'interpreting bilinguals' (Grosjean 1997: 168) and was seen to be attributable to a number of factors which centred on historical and current language usage, mode of language acquisition and current country of residence or frequency of travel to the country where their other language is spoken. It has been seen that a number of participants were aware of changes to their profile over their lifetime. Again, both simultaneous and sequential bilinguals appear in all categories, indicating that factors other than age of acquisition affect perception of the role of dominance in current profiles. The next section returns to the directionality issue which was raised in Chapter

5 in the context of the participants' predictions on their performances into and out of their perceived dominant language. Below, it is pursued in the context of the factors reported by the participants as impacting on their ability to perform the bi-directional tasks.

### **6.3.3 Sub-Theme 3: Directionality**

The third sub-theme detected in the key theme of the Bilingual Self was the role of directionality in the performance of the SI tasks into and out of English. No question during the TAP expressly mentioned directionality but in addressing the issue of the ease or difficulty of the bi-directional SI tasks, every participant was aware of the issue of balance and therefore of the question as to which of the two tasks, into and out of their two languages, would appear or prove to be more challenging. The directionality argument as outlined in Chapter 1 and expanded in Chapter 3 detailed the central elements of the SI task as comprehension, processing and production. The meaning of the input in the source language is held in the mind of the interpreter while the processing mechanism recodes and produces output of the same message in the target language. This is a complex activity, putting cognitive strain on the interpreter, who is also trying to juggle comprehension of the next part of the input material while still delivering the previous output. The traditional position regarding the direction of SI is, as has been seen, that interpreting should be carried out from the weaker B language into the dominant A language, in order to ensure better production outcomes in the dominant language. Williams (1995) underlines the need for further research on the elements involved in bi-directional interpreting and concludes that, while stressful conditions can lead to instances of 'temporary regression' (*Ibid.*: 151) even in highly proficient L2 speakers, in general L1 to L2, that is, A-to-B, interpreting results in a 'higher degree of adequacy, i.e. fidelity to the source text' whereas L2 to L1/B-to-A interpreting produces a 'higher degree of acceptability, i.e. conformity to the standard language' (*Ibid.*: 150-151).

The analysis of the participants' perceptions on the factors which they reported as influencing their ability to interpret in each direction is set out below, beginning with the self-described balanced bilinguals and followed by those who believed themselves to be non-balanced bilinguals. Some participants spoke in the pre-task Think-Aloud Protocol, some spoke in the post-task Think-Aloud

Protocol and some spoke both before and after the SI tasks. For clarity, dominant language is indicated either in brackets after the participants' alpha-numeric code or, in the case of multiple quotes, in the first column under participant reference.

Three simultaneous bilinguals perceived themselves to be balanced.

*Table 55: Balanced bilinguals and directionality*

| Participant       |  |
|-------------------|--|
| Sim24<br>Balanced | I thought <b>the Italian into English was easiest</b> . I thought I had to <b>concentrate more for the into Italian</b> (...) The thing in Italian is the <b>vocabulary</b> . If there's one word that comes up that shakes me that will be an <b>obstacle</b> so hopefully I won't run out of vocabulary.   |
| Sim21<br>Balanced | Even in the warm-up session it was <b>easier to translate English to Italian</b> because I <b>always do that</b> but I never translate Italian and into English. I found myself thinking about how I was having to translate it and I think I struggled more in that direction: Italian to English. Yes. <b>From Italian into English was harder. With the into Italian I found that I was saying more things and actually making sense.</b>   |
| Sim12<br>Balanced | <b>I thought to begin with that it would be easier to translate into English.</b> Actually, I think <b>it's going to be easier to translate into Spanish</b> as I think the English speaker is going to be much slower. I think I'm going to be better translating into Spanish because of the <b>speed</b> of the language and I am going to be <b>good at getting the message across, not necessarily translating the words one by one</b> (...) <b>I want to communicate the general message</b> so specifics like numbers I think I'm going to miss. Interpreting is really not the same as translating! I think I'm better on paper. I don't translate in my head: <b>I choose what I want and I navigate in whatever way I feel comfortable.</b><br><br><b>Post-task:</b> I think I've been good at communicating <b>the general message</b> but I've been very bad because I've <b>given it my own swing, my own connotation!</b> |

Sim24 found it easier interpreting into the language where less concentration was required – English - as she felt a lack of vocabulary in Italian. For Sim21, ‘easier’ meant the direction she was most used to translating, into Italian, where she benefitted from a wider range of options to convey the sense of the original. Sim12 carefully weighed the implications, first thinking into English would be easier, then changing her mind for two reasons: speed and semantic equivalence. She anticipated the English delivery of the input language would be slower than the Spanish, giving her more time to process the output, and she felt that into Spanish would facilitate her aim of conveying semantic, not lexical, equivalence. She was aware, however, of the danger of interposing her own slant on the message.

Similar points were made by the remaining 45 participants - 21 simultaneous and 24 sequential bilinguals - who considered themselves to be non-balanced bilinguals. Both groups fell into both directional camps: those who expected to find it easier interpreting from their weaker into their dominant language (B-to-A) and those who expected to find it easier interpreting from their dominant language into their weaker language (A-to-B).

### **6.3.3.1 Preference for B-to-A Interpreting**

In this section, the perceptions of those who considered that interpreting from the weaker to the dominant language are presented. One participant, Seq21, made the prevailing assumption that the direction would be easier into her 'native', and therefore to her, dominant language, which here was Italian:

Certainly, I think I will be stronger **working into Italian because I'm a native.**

Seven participants acknowledged differing linguistic skill sets and particularly reported difficulties accessing words or vocabulary in their weaker language, which led them to believe that they would perform better into their dominant language (see Table 56 below):

Table 56: Differing linguistic skill sets

| Participant      |   |
|------------------|---|
| Sim3<br>English  | It's easier for me to translate from French <b>into English</b> primarily because my <b>vocabulary is better</b> in English than it is in French and that's where a lot of the time I will stall in French when I'm translating from English because I don't know the equivalent. |
| Seq11<br>English | I haven't spoken <b>Spanish</b> in a while so <b>my vocabulary isn't on point</b> . I did it as a career choice to speak Spanish so I don't have much knowledge in world vocabulary.  |
| Seq18<br>Italian | I will definitely be <b>better from English into Italian</b> because I'm <b>never lost for words in Italian. Sometimes I don't know how to translate Italian expressions into English but never the other way round.</b>  |
| Sim1<br>English  | Probably I'll be more accurate going from French into English because I have a bit more of a higher standard.<br><br><b>Post task: I found it easier working into English because I had more words.</b>   |
| Seq2<br>French   | I think it's going to be easier for me translating <b>English to French</b> . I think it's just because there's more words in French so when you're translating into English you have to <b>find the one word that would complete a full sentence.</b>                            |
| Seq10<br>Spanish | When I'm translating into English I have to <b>look for the words</b> more and when I'm translating <b>into Spanish the words come more easily.</b>   |

Seq8 (English), however, was also aware that the simultaneity and the speed of the process affected her ability to find the right word, even in her dominant language, where she found she was making 'false friends':

I think I might not **catch all the words** in French. I might miss a bit. **If there's one clause and I miss it and that means I miss the next clause then there'll be a knock-on effect...** I **didn't have the words** in French but I knew I was **making false friends** as I was translating into English.

Sim3 (English) was of the opinion that it was easier to interpret into the more dominant language due to a richer vocabulary in it, giving strong indication that his performance into his weaker language was worse than into his dominant language:

It's **easier for me to translate from French into English** primarily because **my vocabulary** is better in English than it is in French and that's where a lot of the time I will stall in French because when I'm translating from English because I don't know the equivalent...primarily it is the element of the translation from **French into English which will be less of a problem than English to French from a vocabulary standpoint (...)** My dominant language is English which is probably why I found it **easier working into English**. I mentioned earlier that **my vocabulary is not as diverse or as broad in French** and that showed up in this activity and again because I was hearing it in English my first natural thought was to throw it out in English with a French accent to try and link it or to make it sound French or try to find some kind of random



synonym in English and transfer it into French. (...) I think a lot of the English into French I was trying **to catch up** and trying to make the **seamless transition** from his words into my way of interpreting. I also speak slower, generally, so **I was trying to speed up** so that it was **almost word for word, whereas at times with the French into English I felt that I was speaking at the same speed as the gentleman on the video.**

He stressed that his vocabulary is not as ‘diverse or as broad’ in French and adds that having to produce output at speed in his weaker language also caused him problems. However, he performed almost as well into French, attaining a 58% score compared to 60% into English.

Four participants in this group emphasised current language use and fluency which influences how they are ‘tuned in’ to listening, speaking or thinking in each language, again highlighting differing linguistic skill sets (see Table 57 below):

Table 57: Current language use and fluency

| Participant                            |  |
|--|--|
| <p><b>Sim14</b><br/><b>English</b></p> | <p>On a day-to-day basis my vocabulary and Spanish would be at the level of talking to your mum.... It takes a day or two for the higher-level words to come forward...I want to make sure I get the Spanish vocabulary. I know it's all in there it's just getting the word in time because I know I have it but it's frustrating when you can't access it immediately (...) I'd say probably translating <b>from Spanish into English will be easier</b> for me than English into Spanish <b>because of the vocabulary</b> that might be more demanding than the vocabulary I would use talking to my mum!</p> <p><b>Post-task:</b> To be honest, I found both directions kind of hard. I think the Spanish was a little bit harder because I didn't get the flow as well. I think because I've been <b>speaking English more than Spanish I got the flow better</b>, whereas in Spanish I got the flow for one or two sentences but when I got stuck on a word then I was a little bit behind and it took me a second to get the word and I'd forget what the person was saying. <b>I think the proficiency of speaking the language day-to-day would make me better in one way than the other.</b> If you had been asking me the questions in Spanish I would've done way better in Spanish or it would at least have matched the English. So, it probably did match my expectations in that I didn't think I would be as good in Spanish or I might get a bit mixed up in Spanish. I know all these words! <b>It was probably because my brain wasn't tuned into the Spanish as much as the English because I've been speaking English all morning.</b> Maybe if I'd been speaking with my mum this morning would have been a bit easier.</p> |
| <p><b>Sim17</b><br/><b>English</b></p> | <p>I think working <b>into English I'll be fairly comfortable</b> with (...) Into the Italian will be the toughest part. The subject won't be difficult but in general working into Italian is more of a challenge.</p> <p><b>Post-task:</b> There were times when I'd say the English was a little bit harder and the Italian a little bit easier but once I actually got into it it was OK. The core problem for me is that my Italian is <b>rusty enough</b>. Even if I sat down and was able to listen to it and listen to it again and then repeat it I would still struggle to express exactly what he was saying. It was interesting to see that. <b>I think if I did this back when my Italian was at its best then potentially they would be more equal than I thought but here going into it I just had the core vocabulary.</b> The vocabulary and the grammatical structures are rusty that just pulling them out was tough enough.</p>  |

Similarly, Sim16 (English) reported that he would struggle with formal language and any less colloquial terms in his weaker language, which he perceives to be considerably weaker than his dominant language:

I would have said that I would be **better from Spanish into English but on the basis of the warm-up I think I will be a lot better working from English into Spanish.** I'm going to struggle with any formal language and any less colloquial terms because my Spanish has solely come about as a result of interaction with people, as opposed to reading in Spanish. I don't do much reading in Spanish; I don't read articles in Spanish. My formal, reporting language in Spanish would be nowhere near as good as it is in English.

**Post-task:** I found the into Spanish harder and the into English easier. Before I did the

practice, that's how I thought it would be but following the practice I thought the reverse.

Sim6 (English) remarked that he cannot think of the translation automatically, even when he knows the words in both of his languages. He attributes this to language acquisition by domain. There are some topics he has covered more in French and in these cases he is more comfortable with French technical words. In other scenarios, he is more at ease with technical words in English:

If there are technical words, even if I know them in each language I can't think of the translation automatically. There are some things I would have covered more in French and I know the French technical words better than the English and vice versa.

I was living in France and I only just got back in March so I think if the topic had been Economics I might have been just as comfortable into French because I **studied Economics in French** but **in most things I think I would be more comfortable into English**.

Seq22 and Seq11 were the two participants who failed the SI tasks in their entirety. However, they still showed understanding of what was required of them. The first, (Seq22), whose dominant language was English, was aware, like one of the balanced bilinguals above (Sim12), that regardless of a specific vocabulary problem, it was not lexical equivalence but in fact semantic equivalence he was striving for:

I was missing certain words that were taking the time coming and you're not able to interpret all of the information: **you're selecting. You have to listen for a while and work out what the main point is in each segment before you speak.** [Into] **Italian was more difficult.** There were certain words that I have that are buried but weren't coming out. *Scala mobile!* [Escalator!]

In a similar vein Seq11, also dominant in English, was conscious of conveying the message as a whole and therefore felt she would have a greater range of options into her 'native' language:

**I can put my own spin on it** and I can **elaborate more in my native language**.

In sum, for participants who perceived it easier to interpret from their weaker language into their dominant language, the focus was on easier production. For them, interpreting from their weaker into their more dominant language entails less overall effort since they feel they have broader vocabulary and greater grammatical proficiency in their dominant language. The group contained both simultaneous and sequential bilinguals.

### 6.3.3.2 Preference for A-to-B Interpreting

Other participants expressed a preference for interpreting into the weaker language. Two participants – one simultaneous, Sim23 (dominant in Italian) and one sequential bilingual, Seq16 (dominant in Spanish) – simply felt that extended residence in Ireland and therefore more recent and greater usage of English had given them more vocabulary in English and they therefore assumed current greater versatility in their technically weaker language. Seq16 had at first anticipated that it would be easier into her dominant language (Spanish) but, to her surprise, felt post-task that it was easier into her weaker language, for the same reasons. Seq16 and Seq20 (Italian) did in fact score higher into their weaker language, but Sim23 did not (see Table 58 below):

*Table 58: Current linguistic versatility*

| Participant      |   |
|------------------|---|
| Sim23<br>Italian | I feel <b>my preference would be from English to Italian</b> . Since I was raised in Italy, I think Italian is the stronger of the two languages. Although, <b>now, living here for six years, I tend to think in English</b> so for me it would be sometimes hard to find the right word in Italian.<br><br><b>Post-task: I thought the Italian would be easy but instead it was the hardest.</b> I had a few moments where I couldn't find the right word in Italian. <b>Maybe I've spent too long here!</b> It's what I was saying before: sometimes I can't find words that should be easy to find. <b>At the moment I find it easier finding words in English.</b> |
| Seq16<br>Spanish | I should find [into] Spanish easier but I've <b>been here a long time</b> and I use English more. I find writing in Spanish very difficult because <b>I don't have any vocabulary in Spanish anymore</b> . The idea of interpreting is hard for me. At some stage I will get <b>stuck with one word</b> and be like 'How do you say this?'  |
| Seq20<br>Italian | <b>I thought it would be easier to translate into Italian and it wasn't!</b> It's possibly because I'm <b>using English more</b> at the moment... I've spent most of my adult and professional life dealing with English. Also, when I was doing my previous Master's it was through English and it was very challenging and that really <b>helped improve my English a lot</b> .   |

Sim15 (Italian) relied on past experience to predict that it would be easier for her to work into her dominant language but after the tasks reported the contrary. Her pre-task prediction was the correct one:

I think I'll be **better working into English from Spanish** because that's what I grew up with.

**Post-task:** I think I was actually surprised by my Spanish; I really was. Remember what I was saying about opening the door? I definitely felt that once I got into it I was opening the Spanish door. **I actually found it easier working into Spanish**. I was expecting it to be way harder but I don't know if that was because of the level (...) I think the most frustrating thing is when you know the word and you've used it before but you can't

find it. I've had experiences before where I know I know a word and I've used it before but I have to look up the dictionary and then **I can't believe it when I see it because of course I knew it!**

Sim10 (English) also felt pre-task she would perform better into her dominant language, but post-task found the reverse to be the case. Her post-task prediction was correct:

I will definitely be **better going from Spanish into English**, I think, just because it's a **more natural switch**.

**Post-task: I found it easier working into Spanish** but that was probably thanks to the experience of the warm-up and the pacing in the Spanish report, which was a bit faster than this would have been and also I'm used to Castilian Spanish than Latin American Spanish. I think the warm-up (...) really helped. You kind of get into a rhythm with it. It was really interesting because I've never done simultaneous before. It was a really interesting experience in that sense.

Seq3 (French, see Table 34) expected to work more fluently and more smoothly into her dominant language but found to her surprise that this was not the case. She was not sure of the reason post-task, but felt it was not simply about vocabulary. However, her pre-task prediction was correct:

I was expecting to be able to translate **from English to French in probably a more fluent way** in the sense that **French being the language that I use I would be able to place the words in the right order without hesitating and in fact it has been the contrary. I felt more comfortable working into English**. I'm not sure why. I must say I knew all the words so it's **not about a vocabulary question**.

Seq12's expectations that 'processing' from her native Spanish into English would take longer turned out to be misplaced (Table 59 below). However, her pre-task prediction was the correct one. Processing was also emphasised by Seq4 when she discovered that it may be easier to process one's native language and then produce speech in the other language. Her post-task prediction was the correct one (see Table 59 below):

Table 59: Dominance and processing

| Participant      |  |
|------------------|--|
| Seq12<br>Spanish | <p><b>I think I'm going to be better translating from English into Spanish.</b><br/>When I talk in English I have to think more than when I talk in Spanish so if I have to process first the Spanish and then translate <b>into English I know it's going to take me longer.</b></p> <p><b>Post-task: I actually found it easier to translate from Spanish to English, maybe because he was talking fast but also because I also had to process so it was actually more difficult to translate from English to Spanish.</b></p> |
| Seq4<br>French   | <p>I'll find it <b>easier to interpret into French.</b></p> <p><b>Post-task: contrary to expectations that you should normally translate into native language....maybe, in fact, the processing works easier if you're processing your native language and then producing the other language.</b> This might in fact be easier than processing it the other way.</p>   |

The contributions of these two participants reflect the current debate on directionality as discussed in Chapter 3 (3.7), where greater consideration is given to the possibility that better comprehension of the source language at linguistic and cultural levels may render the interpreter more competent to interpret out of his dominant language. Equally, the issue of different cognitive processing levels in the interpreter, which may reduce his options in production and, paradoxically, speed it up, was detected by some of the participants in terms of less choice in their weaker language.

Contrary to her expectations, Sim20 (English), for whom the speed of the input was going to be an issue in both languages, in fact found it easier interpreting into Italian as she was able to modify the terminology quickly from her dominant language. Her post-task prediction was correct:

I think I will be okay doing the simultaneous interpreting. I might not be able to pick up everything but not because I don't know how to translate it but because **it's said so quickly** because I can't hear it properly. From the test run, the content of what I was translating wasn't beyond my reach. I think **into English would be easier for me** because that would be my stronger suit, although I do work from English into Italian all the time in my employment. I would have **more ease going from Italian to English** than vice versa.

**Post-task:** Because, in the Tube speech, the terminology was easier, you could **modify it quite quickly** in Italian so I found that the level was equally okay in both languages. In fact, I found it **easier to say some things in Italian** than I did in English! I know that the Tube isn't difficult but sometimes you don't quite get what he's saying and you feel like it's moving quickly and you feel like you haven't translated exactly what he said but he is still going on and you have to catch up.

Seq5 (English) was also aware of the importance of better comprehension in the dominant language:

Just from that [the warm-up] I felt **more comfortable translating into French**. I don't know why. I'm completely surprised by that. I think it's something to do with accents and **trying to tune your ear in very quickly** to somebody blathering away in French is hard. You **understand the English** and it's very easy to miss things in French and even if you can't find the word I suppose you **can find ways around it so you get the general impression**.

**Post-task:** I think in some ways I expected because **normally don't you interpret into your native language?** Like, often, so **I'd expected that to be easier** and it probably wasn't necessarily... It's like the little words in the one about the Tube and the **speed**. When I did the practice ones **I would've expected the into English to be much easier and it wasn't: it was much harder**.

Seq14 (Spanish) found that the SI task was much more complicated than he had envisaged. He found automatic comprehension in his dominant language actually gave him a better chance of improved output. His prediction that for him interpreting into the weaker language was correct:

My impression is that **when I hear my native language, since I don't have to pay attention to it because it comes into my mind more automatically, I can concentrate more on production**. Here, English, I understand but the effort in my brain is a little more complicated. That's my feeling. I have to both pay attention to what he says and - **funnily enough - it's my native language where I have to produce where there is more effort to understand what I hear and this makes the whole experience a little bit more complicated**.

Sim11 (English), at first undecided, also chose to prioritise understanding in the dominant language and production in the weaker. Post-task she was again unsure. She was in fact wrong in her pre-task prediction:

I wouldn't be able to tell you which language I found it easier working into. It's easy for me to **listen to things in English and then say them in Spanish**. Listening to Spanish - if it's the right accent - I can understand it but it's a little bit more difficult for me. **It's definitely easier for me to understand English and then translate into Spanish, I think**. Just after doing that I would say that that is true.

Sim18 at first expected to find it easier working into her weaker language but subsequently detected problems either way (see Table 60 below). She performed better into her dominant language. Sim22 also saw different problems either way for him personally as he has a different attitude to each language, one more casual and one more critical of his output. He was, however, better into his weaker language (see Table 60 below):

Table 60: Difficulties in both directions

| Participant      |   |
|------------------|---|
| Sim18<br>English | I think going to be better working into Italian because I'm <b>more used to listening in English</b> .<br><br>Post-task: <b>Into Italian is trickier because of the vocabulary but I think that into English is harder because of how the source language is structured.</b>  |
| Sim22<br>English | With the into Italian I wasn't as worried about what was correct and what was incorrect because I was working with an innate thing, a sense of feel: <b>if it felt right then I said it</b> , whereas going from Italian to English - because I studied English and because I went through the stress of the Leaving Cert - I naturally <b>went to the more analytical, asking myself if it was good</b> . With the Italian I didn't care; I was just doing it. |

Distinguishing between speed of interpretation and quality, Sim19 (English) reported that directionality is complex on different levels: she is faster interpreting into her weaker language but the quality of her output is better when interpreting into her dominant language. Her score was, as she had detected, higher into her dominant language:

It's been really interesting. I think I was **faster** working into Italian but the **quality** of the one into English was better because obviously my English is better and it makes more sense. However, I think hearing in English made me think quicker in Italian, whereas working from Italian took more time to get into it.

Sim8 (English), after the warm-up but pre-task, noted the difficulty in selecting the word in her dominant language because of the greater range available to her but post-task equally found the lack of vocabulary in her weaker language a decided disadvantage. Her scores were equal:

From what I've just done, [**warm-up**] funnily enough, I definitely felt more comfortable into French, which I wasn't expecting. I think it's because **I'm so used to finding alternative words in the language that I'm weakest at it's easier for me to find a new word**, whereas **in English and trying to find the exact one because I'm so used to having the right words**. That was a really interesting discovery, actually. I'm worried about the French to English.

Sim10 (English) was surprised that working from her dominant language was not as 'natural' as she had anticipated and attributed the fact that she felt she had performed better in the other direction to both speed of source language and the experience of the warm-up. Her post-task prediction was correct:

I will definitely be **better going from Spanish into English**, I think, just because it's a **more natural switch**.

**Post-task: I found it easier working into Spanish** but that was probably thanks to the experience of the warm-up and the pacing in the Spanish report, which was a bit faster



than this would have been. I think the warm-up (...) really helped. You kind of get into a rhythm with it. It was really interesting because I've never done simultaneous before. It was a really interesting experience in that sense.

In this sub-theme, the perceptions of those who considered that interpreting from the dominant to the weaker language were presented. Although their reasons echoed the new thinking on prioritising understanding in the source language and took into account the increased speed that might be achieved when target language afforded reduced choice, in the end almost all changed their minds in favour of the traditional B-to-A position on directionality. As with the previous group, this group also contained both simultaneous and sequential bilinguals. The top-ranked sequential bilingual, Seq6 (English), who scored second in the overall rankings, summarised the factors involved in the SI task:

I think I will probably be relying on trying to **summarise and get the core** of what is being said, at least at that **speed** as it can be difficult to keep up so I'm wanting to **convey the main things** being described. I guess I would be trying to get it **as exact as possible**, make sure that I use the **same kind of register** in the other language, which might or might not happen. **My facility in the two languages wouldn't overlap exactly so my ability to interpret will depend on how close the content is to my experience**. I probably haven't had to do interpreting of everyday general subjects that I wouldn't have chosen myself so that's interesting: having to talk about **something that is kind of imposed** in that sense. He was **a little faster** in English than the French guy so that made the **concentration** (...) the **need to stay well connected** with the speech (...) it felt **more demanding overall** but I wouldn't say that it was just the language.

Reviewing overall the issues of speed, simultaneity, concentration, semantic equivalence and taking into account his own personal profile, he concluded in favour of the traditional position on directionality: a preference for interpreting from the weaker into the dominant language. Seq6 was correct in his prediction, scoring 93% into English and 79% into French.

This part of the chapter sought to present the perceptions of the 48 participants on the issue of whether simultaneous interpreting was easier into the dominant or into the weaker language. Both simultaneous and sequential bilinguals identified differing linguistic skill sets, acquisition by domain and current language use as factors which influenced their expectations or explained their performance. The first group preferred interpreting from their weaker into their more dominant language. For them, this entailed less overall effort as they felt they had broader vocabulary and greater grammatical proficiency in their dominant language. The second group started out initially in the other camp, as they considered comprehension of the input was of greater value, even if the

output would not be as rich in the target language as it was the weaker. However, the majority of these participants changed their minds after experiencing the tasks. Both simultaneous and sequential bilinguals were found in both camps. The global position, therefore, was that a majority of participants, both simultaneous and sequential bilinguals, concluded that simultaneous interpreting was more easily performed into the dominant language.

#### **6.3.4 Conclusion to Key Theme 1: The Bilingual Self**

This section of Chapter 6 has presented the first key theme which emerged from the Think-Aloud Protocols, the Bilingual Self, subdivided into (i) participants' perceived bilingual identity/degree of bilingualism, (ii) their reflections on the nature of dominance with regard to the SI tasks and (iii) their contributions to the issue of directionality from their unique perspective. The remaining section of this chapter completes the presentation of the qualitative findings with discussion of the second key theme which emerged from the Think-Aloud Protocols: Language Storage, Access and Retrieval.

#### **6.4 Key Theme 2: Language Storage, Access and Retrieval**

The second key theme which emerged from the Think-Aloud Protocols was Language Storage, Access and Retrieval. Languages were perceived by participants to be stored in five possible ways: completely separately, separately with crossover, in the same place, 'thereness' and according to experience, domain or interlocutor. Alongside a description of how and where they felt their languages are stored, participants also commented on access to and retrieval of both languages. Some of these references to retrieval came about while they were talking about storage, while others emerged during the rest of the Think-Aloud Protocols. Despite its theoretical complexity, in practice the SI task boils down to finding equivalence of meaning but the rapidity with which this equivalence is required puts heavy cognitive demands on the person interpreting. The participants reported that for them the mechanism of retrieval was influenced by the following factors: current usage/location, memory, coding, ageing, attrition and, to a lesser degree, proficiency/dominance. As it will not be possible to disentangle all these threads individually, they will be highlighted in the text in *italics* so that their recurrence can be noted.

### 6.4.1 Languages Stored Separately

Seventeen out of 48 participants (seven sequential and 10 simultaneous) reported that their languages were stored in separate places. Seven of these use different expressions to describe how they perceive their languages to be stored, such as ‘banks’, ‘box’, ‘chips’, and ‘door’, as outlined in bold in Table 61. Again, key phrases will be highlighted in bold.

*Table 61: Expressions describing language storage*

| Participant |   |
|-------------|---|
| Seq3        | I really feel like it's two different <b>worlds</b> for me; two different <b>stores</b>   |
| Seq18       | I feel like I have two <b>stores</b> for English and Italian. I don't know where they are physically located but they are separate. Italian and I are indistinguishable but I know my English is not with them!   |
| Seq22       | I would not say my languages are stored in different parts of my brain but maybe in different parts of my language ' <b>box</b> ' or memory. What it seems to feel like is that I am accessing two [gives name] or identities, which were built in different places and times in my life.   |
| Sim21       | I feel like I have an English <b>store</b> and an Italian store.  |
| Sim22       | I think my languages are separate, instead of it all fitting in one knowledge <b>bank</b> . I think that there are two banks that I feed from. I think that they are separate things. <b>I do flick between the two quite easily</b> and I don't feel like it's a physical flip; there are two definitely different knowledge banks.  |
| Sim10       | I feel like I have separate <b>stores</b> ; different <b>chips</b> .  |
| Sim14       | I feel like I have a <b>store</b> for English and a store for Spanish but there is a lot of crossover between the two.  |
| Sim15       | My languages are definitely behind two separate <b>doors</b> .  |
| Sim4        | I would say they are <b>quite separate</b> - even though sometimes I'm in an environment where I'm speaking both French and English - because generally they are <b>split</b> . At home I speak French and then when I'm outside I speak English so they are quite separate and then when I'm in France obviously I speak French so there are very few situations where I'm in switching constantly between both. |
| Sim8        | I feel like I have <b>two separate stores</b> for my languages. If I'm speaking French, I'm not pushing the English aside to get the word. <b>It's just completely natural</b> .  |
| Sim18       | My languages are definitely <b>stored separately</b> .  |

Storage visualised thus by these participants makes for a variety of verbs which illustrate the way in which they access – or do not notice accessing – their languages. Examples are highlighted in bold in Table 62.

**Table 62: Verbs describing language access**

| Participant |  |
|-------------|--|
| Sim22       | I think that there are two banks that <b>I feed from</b> . I think that they are separate things. I do <b>flick between</b> the two quite easily and I don't feel like it's a physical flip; there are two definitely different knowledge banks.   |
| Sim14       | The language that would be a bit more higher level might have a store but <b>I don't notice accessing it</b> . I can quite <b>fluidly go</b> from English to Spanish; I don't go 'y ahora voy a hablar en español' [and now I'm going to speak Spanish] and 'now I'm going to speak in English'. It just sort of goes across so I don't notice having stores. When I've been speaking one language more than the other it's like I have two different mindsets and I have to bring the one I'm using less back to the front. |
| Seq5        | I constantly <b>move between</b> the two languages.  |
| Seq22       | What it seems to feel like is that I am <b>accessing</b> two [gives name] or identities, which were built in different places and times in my life.  |
| Sim21       | I find with work that it can be difficult to move from one store to the other. I am afraid that I'm going to say something wrong to my customers because I'm <b>dipping into</b> one store and then into another.  |
| Sim17       | I feel like English is very much <b>blocked off</b> in my mind and then Italian, Spanish and even a bit of French kind of <b>float about</b> somewhere else in my mind.  |
| Sim18       | My languages are definitely stored separately but I can <b>switch seamlessly</b> between the two.  |

Both simultaneous and sequential bilinguals, then, report their languages to be stored separately. However, comparing the two groups in the two tables above, the simultaneous bilinguals imply greater ease of movement between and access to their two languages than the sequentials. Two of the 17 participants who felt their languages were stored in separate places were able to identify a clear location for each language. Seq19 and Seq20 named specific locations in which their languages are located (Table 63 below).

**Table 63: Languages located in a specific place**

| Participant |   |
|-------------|---|
| Seq19       | I have the feeling that the language in use is <b>in my forehead</b> . I feel like all my other languages then come from <b>the back of my head</b> .                 |
| Seq20       | I feel that they are stored <b>in the left hemisphere, behind the forehead to the side above the ear and the back</b> . Italian feels more <b>on the right side</b> . |

Two of the participants who spoke more than two languages described groups of languages being stored in different places (see Table 64 below).

**Table 64: Different languages located in different places**

| Participant |   |
|-------------|---|
| Seq20       | I feel that they are stored in the left hemisphere, behind the forehead to the side above the ear and the back. Italian feels more on the right side.   |
| Seq14       | I often have mentioned with friends that I have the feeling my Greek or my rudiments of Italian or German are stored in my mind quite far from my English. My feeling is that my Spanish is not stored. It is always there. With my English the feeling is more and more very similar, with the difference that, with English, I feel more insecure with grammar or, often, some specific vocabulary - in particular registers - feels limited. My French, though, seems to be 'flooded' with my English. But I am not using French often, whereas I use English every day. I would describe it like this: 1. Spanish is everywhere. I do not need to think about it. 2. English is growing every day and reaching far corners in my mind, leaving little space to my former dominant foreign language. There is feeling of some sort of competition and interference between L2 and L3 but French does NOT bother me when I speak English, although I seem to remember it DID right before English took over. 3. French is the opposite: weakening. 4. Other minor languages in my mind do not feel threatened, since they never were very strong: German, Italian, Portuguese, Modern Greek. 5. Classical languages, Classical Greek or Latin, seem to be stored in a completely different region, maybe because they are not used in speech, only in reading or translating. |

Three participants note that their languages are stored separately but add that access and retrieval are dependent on *current language use* or *geographical location* (Table 65). Seq5, the sequential bilingual, in particular notes how she uses one language to access the other, aware that she is missing elements which she would have been familiar with when she was using French more often. The two simultaneous bilinguals, on the contrary, do not use this translating mechanism:

*Table 65: Separate stores and current language use*

| Participant |   |
|-------------|---|
| Sim15       | My languages are definitely <b>behind two separate doors</b> but <b>when the Spanish door is open I'll never lose the English. If I'm in Spain</b> for a month or two months I have it and <b>I can dominate them both but when you live in a country where it's all in English the Spanish door closes and gets rusty.</b>   |
| Sim16       | In terms of how my languages are stored, the <b>English is there all the time.</b> I have <b>no difficulty in accessing</b> English; it just comes to me. In Spanish, what I find is that when I've been conversing in Spanish for one or two days it <b>becomes much more accessible.</b>  |
| Seq5        | I think my languages are probably <b>stored separately!</b> If I haven't been speaking French for a while it can be a <b>real struggle to find those words</b> again! I will then do a lot of <b>direct translations</b> even though in my mind I know that there are nuances surrounding those phrases which I would have known once upon a time! But they escape me if I am a bit <b>rusty!</b> |

#### 6.4.2 Languages Stored Separately with Crossover

One sequential and three simultaneous bilinguals report that they have separate language stores in their mind which overlap (Table 66):

*Table 66: Languages in different places with crossover*

| Participant |  |
|-------------|--|
| Seq23       | I feel the various languages are stored in <b>different</b> (although <b>sometimes overlapping</b> ) parts of my consciousness.      |
| Sim19       | The way the two languages are stored in my mind there is a lot of <b>crossover.</b>  |
| Sim14       | I feel like I have a <b>store for English</b> and a <b>store for Spanish</b> but there is a lot of <b>crossover</b> between the two. |

Sim18 and Sim14 add that this crossover enables ease of movement between their languages, which happens unconsciously but nevertheless does not result in confusion between their two languages (Table 67):

*Table 67: Facility in moving between languages*

| Participant  |   |
|--------------|---|
| <b>Sim18</b> | If I'm having a conversation with one person in English or Italian and someone else makes a comment or asks me a question in the other language, I'll <b>switch</b> and answer in the other language <b>without realising, then go back</b> to the first conversation. I <b>never mix up</b> the two - I do with my learned languages (French, Russian, etc.) but <b>not with my two native</b> languages.  |
| <b>Sim14</b> | I can <b>quite fluidly</b> go from English to Spanish; I don't go ' <i>y ahora voy a hablar en español</i> ' [and now I'm going to speak Spanish] and 'now I'm going to speak in English'. It just sort of <b>goes across</b> so <b>I don't notice having stores</b> . When I've been speaking one language more than the other it's like I have <b>two different mindsets</b> and I have to bring the one I'm using less back to the front. At the start it's like that and then 20 minutes in it's just there and I don't have to go ' <i>esto es una puerta</i> ' [this is a door]'. I find when I go over to Spain it's the same thing: for the <b>first 10 minutes it's stilted</b> and then <b>it just clicks</b> and you <b>forget</b> . |

### 6.4.3 Languages Stored in the Same Place

Eleven participants (four sequential and seven simultaneous bilinguals) reported their languages to be stored in the same place (Table 68). As was the case with Seq5 (Table 65), who, nevertheless, felt her languages were stored separately, Seq16, another sequential bilingual, uses one language to facilitate access to the other (Table 68).

Table 68: Languages stored in the same place

| Participant |  |
|-------------|--|
| Seq16       | Mine are the <b>two of them together</b> and I would <b>use them simultaneously</b> , with a <b>stronger</b> presence of Spanish. It is <b>harder to completely separate them</b> : that requires more concentration on my part. I'm surrounded by English so whenever I get stuck I try to translate it into Spanish, while if I'm stuck when speaking English, I will go around until I find the way but I would <b>very rarely translate it</b> from Spanish.   |
| Seq1        | My languages are much more <b>mixed</b> now than they ever were before. Before I was very strict. At the same time, I'm aware of this and I don't like it and I'm trying to fight it because I don't want to use <i>charabia</i> [gibberish]. I think it's the influence of the children, even though they don't mix the languages anymore: they start in French they usually finish in French. It's me who's <b>mixing</b> the two languages much more, which is not good.  |
| Seq8        | I feel like it's a <b>mish-mash</b> ; a <b>mixture</b> in my head.   |
| Sim1        | I think I <b>think in both</b> at the same time. I would think about one word and feel like it's <b>sprung back and forth</b> if I need it in a language.  |
| Sim3        | The two languages are stored in the <b>same</b> "area"(?) to me. It almost feels like <b>both</b> languages are made <b>available</b> to me and when thinking of a particular word or phrase the equivalent in the other language lingers in the "background" and I can <b>tap into it seamlessly</b> . Growing up speaking " <b>franglais</b> " kind of helped me develop the ability to <b>switch</b> from one language to another without having to think about it or actively start thinking in the other language.  |
| Seq24       | I think languages - or language skills - are stored in the <b>same place</b> in our mind.  |
| Sim20       | In terms of how my languages are stored, I think it's <b>mixed in together</b> when you acquire a language from infancy. I think it does tend to <b>merge</b> and mix into together because as a child you're <b>not conscious of</b> speaking different languages: you're just conscious of having to address <b>mum</b> in this and <b>dad</b> in that or <b>school</b> in this language and <b>mum</b> and <b>dad</b> in that language. I find that my French is <b>compartmentalised</b> . French, behind Italian, and I would use my Italian a lot with my French. The two of them I would visualise together, as opposed to the English. |
| Sim24       | I feel like my languages are quite <b>mixed together</b> in my mind.   |
| Sim9        | I feel like English and Spanish are in the same stores: when I speak one it's not like the other one is turned off. I feel like they are <b>intertwined</b> .  |
| Sim11       | My languages are like a <b>mix</b> in my head.   |
| Sim7        | <b>They're together</b> : if I see something, I see the word in whatever language it is. If I see a pen it's not really a different thing: it's just a 'pen' or a 'stylo'. I don't really get different things for them. Even a car: depending where I am and who I'm with then that's when I choose the word in whichever language but they appear to me <b>all in one space</b> .  |

Two participants, Sim1 and Sim3, highlighted ease of access/retrieval in both their languages when needed. Seq16, though reporting the two languages stored in the same place, had a sense of the dominant language having a stronger presence and Sim20 senses a hierarchy of her three languages, with one being



compartmentalised within the same area. Sim24 goes on to elaborate that geographical location further determines which of his languages appears to be stored more prominently and Seq8 highlights the role of recent usage (see Table 69 below):

*Table 69: Languages stored in the same place and according to location/language in use*

| Participant |  |
|-------------|--|
| Sim24       | It depends on <b>where</b> I am. If I'm in Ireland and I'm speaking English every day and doing things in English then I would have predominantly English in my mind but then I speak to people in Italy every day so I have the Italian there but my thoughts would mainly be in English. While I'm in Italy, since I'm speaking Italian most of the time, my thoughts would be predominantly in Italian. |
| Seq8        | I also speak Spanish and a bit of Irish but they are not usually strong enough. It would only be if I had been speaking Spanish <b>recently</b> . French is dominant in that sense.  |

Two participants reported using words in another language by accident or because they felt they encapsulated an idea better than the equivalent in the language in use (see Table 70 below):

*Table 70: Speaking words in a language by accident or because they fit better*

| Participant |  |
|-------------|--|
| Sim1        | I would think about one word and feel like it's <b>sprung back and forth</b> if I need it in a language but if I was thinking and – like you said earlier – if I didn't have the word in English I'd just think of it in French and kind of keep going. Like in English exams I have written a French word by mistake if I thought I just felt it fitted better. |
| Sim9        | When I speak Irish (which I'm really bad at) Spanish would come out. With Spanish and English, I don't have that problem.  |

One participant, Sim11 (English), discussed how her language use seems involuntary: her initial choice is usually automatically in Spanish but when she takes the time to deliberate it is in English:

The language I think in is just the one that comes to me first. If something happens, like you drop something and you instantly react by swearing or something, that always comes out in Spanish for me. My initial reaction is in Spanish and I **don't have to think about** it but then **when I'm thinking** things through it's mostly English.

#### 6.4.4 ‘Thereness’

Four simultaneous bilinguals and one sequential bilingual participant did not locate their languages in a particular place but instead felt they were ‘just there’ (Table 71).

*Table 71: Languages just ‘there’*

| Participant |   |
|-------------|---|
| Sim5        | They’re <b>just there</b> . I don't think about them; they're just there.   |
| Seq14       | My feeling is that my Spanish is not stored. It is always <b>there</b> .  |
| Sim12       | I don't translate in my head: I <b>choose</b> what I want and I <b>navigate</b> in whatever way I feel comfortable. When I hear Spanish I just automatically understand so I <b>don't have to translate</b> . |
| Sim11       | There's no way it's stored in my mind; they're <b>just there</b> . Sometimes it can be a mixture of both languages but they're kind of <b>just both there</b> .   |
| Sim16       | In terms of how my languages are stored, the English is <b>there</b> all the time.  |

One simultaneous bilingual, Sim12, reports that she does not translate from one language to the other but ‘navigates’ and ‘chooses’ in a way that indicates smooth access to each language when required. Three participants described the ‘thereness’ further (Table 72). For Seq14, his native Spanish is ‘everywhere’ and accessible in his mind but this is now also beginning to happen with his English. Two participants detail how retrieval in ‘thereness’ is dependent on *current language use* and *proficiency*, as shown in the examples in Table 72. Sim5 finds that when a language is ‘rusty’ it takes several days’ immersion to get back to her previous fluency. Sim16 felt that his Spanish becomes much more accessible *after several days of speaking the language*.

*Table 72: ‘Thereness’ retrieval*

| Participant |   |
|-------------|---|
| Sim5        | I’m <b>rusty</b> so it takes me <b>a few days of immersion</b> to get back to my previous <b>fluency</b> .                        |
| Sim16       | In Spanish, what I find is that when I've been conversing in Spanish for one or two days it becomes <b>much more accessible</b> . |

Participant Seq14 describes how *time* and *usage* have shaped his language profile, making retrieval easier or more difficult depending on the *current order of dominance of his L2s*:

There was a time when French was my first foreign language (up to when I was maybe 22 or 23) and I was getting **near-native fluency**. My English did not only later **surpass** my French but somehow it has been **weakening** my French **over time** because of the **many interferences** I feel. When I try to speak French often the English word **appears** in my brain first and I have to **make the effort** to look at it, realise it is English, reject it and go back looking for the French word. This **takes time** and, especially when speaking, it may **interrupt the flow** of my conversation, the whole thing being very tiring. I feel, though, I could **reverse this with some practice**. But I am not **using** French often, whereas I **use** English every day.

#### **6.4.5 Languages Stored According to Experience, Domain or Interlocutor**

Five participants, two simultaneous and three sequential bilinguals, noted that for them their languages are principally stored according to the language in which they experienced events in the past which is often linked to geographical location and also by domain or according to the language of an interlocutor. This echoes current thinking on language-dependent recall (Viorica and Neisser 2000) and the role of memory in encoding and decoding: retrieval has been found to be faster if the coding language of retrieval and of acquisition is the same (Marian and Kaushanskaya 2007). The references to domains also reflect Grosjean's Complementarity Principle Model (2008). Participants also noted that there was unequal exposure to different domains across their languages and over time (see Table 73 below).

Table 73: Languages stored principally according to experience, domain or interlocutor

| Participant |   |
|-------------|---|
| Seq2        | I would say language is <b>stored according to the memories or activities associated</b> to them, i.e. I first learnt to <b>bake</b> with my American family, so I am familiar with baking terms <b>in English</b> . However, <b>math or cooking savoury</b> is associated in my mind with <b>French</b> language, because I have experienced those in French. Sometimes both or I lose a sense of the technical language if I do not use it. For example, I first <b>started Law in French</b> but over the years have continued in English so I went from being familiar in French to English in Law. And nowadays I could even say I am <b>more comfortable practising in English</b> . However, I notice I <b>dream in the language of the country I live in</b> . Therefore, when I moved back for to France for bit, I started dreaming in French again and would even dream that people that usually only speak English to me spoke French. Therefore, I <b>assume I store language as I go through life experiences</b> . |
| Seq6        | I used to experience the storage of both French and English as accessible by a <b>flick of a context switch</b> . For over ten years now I only get to France maybe once a year for a week. I quickly start using my French a lot at such times (typically teaching intensively), with the <b>context switch</b> making my French quickly accessible and on the <b>front shelves</b> of my brain. However, <b>over time</b> (and with age?) I do find I'm <b>slower at locating</b> all the resources - as if there's <b>more of a warm-up time</b> .   |
| Sim7        | If I see something, I see the word in whatever language it is. If I see a pen it's not really a different thing: <b>it's just a 'pen' or a 'styro'</b> . I don't really get different things for them. Even a car: depending where I am and who I'm with then that's when I choose the word in whichever language but they <b>appear to me all in one space</b> . If I were to look at a car, the instant thought that would go through my head would be the word in the different languages and then depending on who I am with - be it a German friend or French person in the family or English-speaking friends - however many different words for that car would appear and I would just pick the one that is <b>right for the situation</b> .   |
| Sim8        | As for the way my languages are stored, I think it <b>depends on who I'm with</b> because when I'm in France I find that <b>my thoughts do become more French</b> ; I would start thinking in French, whereas <b>in Ireland I think constantly in English</b> . Something that was pointed out to me that I never realised was that, from a young age when I speak to my mum, half the sentence will be in French and the other half will be in English, not necessarily consecutively but every third word or fourth word would be in one language and then I would switch back. So, how I access my languages depends on who I'm with at the time.  |
| Seq15       | I think it <b>depends on the situation</b> and who I am talking to. For instance, if I am talking to my older sister or a close friend, I often find that both languages are present in the conversation and we <b>use them freely without any limits or boundaries</b> . However, if I am talking to my <b>mom</b> , I am always in <b>Spanish-mode</b> , even if I forget certain words, because I know she would not understand me in English, and I have never communicated with her in the English language. The same goes for my <b>dad</b> , any <b>elderly member of my extended family</b> , or when talking to a <b>stranger</b> back home. So, for me, I would say it <b>depends on the person and context</b> . I would say sometimes they could be quite separate and other times they're both in my mind.   |

Both simultaneous and sequential bilinguals reported the influence of *recent usage* in retrieval. Outside of the specific issue of storage, two participants highlighted this (see Table 74 below):

*Table 74: Recent usage and retrieval*

| <b>Participant</b> |  |
|--------------------|--|
| <b>Sim4</b>        | My girlfriend is always asking me how to say something in French and I won't know. Because we speak in English sometimes I try to speak French to her for a minute or two and <b>see if it will trigger something</b> . Generally, it doesn't work; I still can't find it but I know I know the word. I can never find it. That's my <b>English-speaking mode. I'm using English more often so I can access it faster.</b> |
| <b>Sim21</b>       | It would be rare for me to find other Italian people talk to, which means that <b>sometimes specific words won't come to me in Italian.</b>  |

In sum, there were five perceived main locations for storage: (i) completely separate, (ii) separate with crossover, (iii) in the same place, (iv) 'thereness' and (v) according to experience, domain or interlocutor. Both simultaneous and sequential participants reported their languages stored in all five locations. Although two simultaneous bilinguals did report greater fluidity in moving between their two languages and easier access to each when needed as noted in the examples highlighted, their comments simply reflected their perceptions, which did not in fact match their scores. Given that, in practice, retrieval is more important than storage for the SI task, this ease of access would seem to give simultaneous bilinguals an advantage over the sequentials.

Both simultaneous and sequential bilinguals report that for them recent usage and location is a factor in retrieval. Two simultaneous bilinguals report that current language proficiency is a factor and one sequential bilingual narrowed this to the current order of dominance of his L2s. Finally, both simultaneous and sequential bilinguals report easier retrieval if the language or context of encoding was the same as the language of retrieval.

#### **6.4.6 Other Factors Perceived to Affect SI Performance: Ageing and Attrition**

The 48 participants were divided into 10 age brackets from 18 to 67 years. Two-thirds were aged under 38. Out of 10 participants aged over 48, only four raised ageing with regard to access and retrieval. The ages of these four participants ranged from 48 to 67 and all were sequential bilinguals (see Table 75 below).

Table 75: Ageing

| Participant | Age bracket | Overall ranking  |   |
|-------------|-------------|------------------|---|
| Seq4        | 63-67       | 6 <sup>th</sup>  | I kind of also wonder whether age comes into it; whether <b>younger</b> people find it <b>easier</b> .  |
| Seq6        | 53-57       | 2 <sup>nd</sup>  | Over time (and with age?) I do find I'm <b>slower at locating all the resources</b> - as if there's <b>more of a warm-up time</b> .   |
| Seq24       | 48-52       | 34 <sup>th</sup> | Even outside of languages, sometimes I have problems <b>thinking of the right word</b> , even in Italian, so I don't know if it's just the ageing process!  |
| Seq1        | 48-52       | 44 <sup>th</sup> | <p>What I've found is that because of my <b>memory working differently with age</b>, the ideas don't come up as quickly so, even though I do understand in English, <b>out of the full information I'm getting together in one minute I will only be able to give you back one or two pieces of information</b>. I think that's just because of the structure of your brain and the way, <b>after a certain age</b>, the information doesn't come up as quickly as you would like it to. I'm aware of this as well and I think it's something that you have to work on in order not to lose it. I've found the same when I teach. My grandmother used to do maths at 70 years of age every day to try to keep training her brain. I haven't found a way for myself because I've been busy but I think it's very important to keep that up.</p> <p>[I'll] probably [struggle] <b>finding the accuracy of the words because of this slowing down of the brain</b>. I'm not geriatric but I am realistic! I know when I have to give a speech in French it takes time to get back into it. I know it's stupid but it is true. It's fascinating anyway!</p> |

From the range of results of the four participants who discussed the ageing issue (2<sup>nd</sup> to 44<sup>th</sup>), it is clear that, although within their perceptions of how they had done they were aware of ageing difficulties, their concerns were not necessarily borne out by their performances: the oldest was in 6<sup>th</sup> place overall, second oldest in 2<sup>nd</sup> place and the third and fourth oldest ranked 34<sup>th</sup> and 44<sup>th</sup>. The spread of results 28% - 86% was comparable to the overall spread of results, 0% to 90%.

Only nine participants, five simultaneous and four sequential bilinguals, referred to attrition during the two Think-Aloud Protocols, noting that participating in the interpreting tasks had triggered the realisation that attrition had taken place. This provoked a variety of emotions ranging from surprise to sadness and nostalgia. The three main sub-themes which arose surrounding the issue of attrition were (i) the domains in which participants used their languages, (ii) their current use

of a language and, (iii) the perception that having spent so long in a country where their L2 is spoken they had become more comfortable in their L2 than their L1. One participant also detailed the effect of an L3 on their L1 and L2 as they perceived it.

Three participants performed significantly better than the others in this category. The first (Seq20) describes her impressions when speaking her native Italian in Italy. She was in the 43-47 age bracket and ranked 3<sup>rd</sup> overall.

I've spent most of my adult and professional life dealing with English. Also, when I was doing my previous Master's it was through English and it was very challenging and that really helped improve my English a lot. As a result, the **Italian really went down the drain**. I really started **experiencing difficulties** when I travelled back to Italy. I **wasn't speaking proper Italian** and I felt that I had to **explain things to Italians**. It was more of a sensation than a reality but that was the impression that I had.

The second participant (Seq14) outlines his experiences with his first foreign language, which has now been superseded by English. He was in the 48-52 age bracket and ranked 13<sup>th</sup> overall.

There was a time when French was my first foreign language (up to when I was maybe **22 or 23**) and I was getting near-native fluency. My English did not only later **surpass** my French but somehow it has been **weakening** my French over time because of the many interferences I feel. When I try to speak French often the English word appears in my brain first and I have to make the effort to look at it, realise it is English, reject it and go back looking for the French word. **This takes time** and, especially when speaking, it may interrupt the flow of my conversation, the whole thing being **very tiring**. I feel, though, I **could reverse this with some practice**. But I am **not using** French often, whereas I **use** English every day. I would describe it like this: 1. Spanish is everywhere. I do not need to think about it. The only thing I have noticed **lately** is that, although the grammar I use is correct in Spanish, I tend to avoid structures that WOULD BE wrong in English. 2. **English is growing** every day and reaching far corners in my mind, leaving little space to my former dominant foreign language. There is feeling of some sort of competition and interference between L2 and L3 but French does NOT bother me when I speak English, although I seem to remember it **DID right before English took over**. 3. French is the opposite: **weakening**. 4. Other minor languages in my mind do not feel threatened, since they never were very strong.

The third participant (Sim17) details the effect his L3 has had on his L2. He was in the 28-32 age bracket and ranked 18<sup>th</sup> overall.

My mum is Italian so as a **very young kid** I grew up speaking Italian and English. When I was **three or four I commonly spoke both**. From the age of **six onwards I would say my Italian started to decline** a little bit because I was in school and speaking English all the time and my mum speaks English so by the age of **18** I would say that my **Italian had declined quite a lot**. I could understand but my speaking wasn't great. Then I came to Trinity and did European studies and did Italian in third year as my major language. I went on an Erasmus there. When I came back from Italy my Italian was probably a C1 or C2 level so nearly perfect. If not, it was **pretty strong**. Then a couple of years later I moved to Spain so in Spain my **primary second language slowly started to shift**. I'd say my **first year in Spain** I still spoke much better Italian and Spanish and then it **slowly started to turn**. **Now**, I think my Spanish is a good bit better than my Italian. The core problem for me is that my Italian is **rusty** enough. Even if I sat down and was able to listen to it and listen to it again and then repeat it I would **still**

**struggle to express exactly** what he was saying. It was interesting to see that. I think if I did this **back when my Italian was at it**

**s best** then potentially they would be more equal than I thought but here going into it I just had the core vocabulary. The vocabulary and the grammatical structures are rusty that **just pulling them out was tough enough**.

These three participants - one simultaneous and two sequentials - were the oldest in the group but, respectively, in order of age, performed better than the following six. Despite their concerns, there was no evident connection between their perceived attrition and their scores but, as with ageing, within their capabilities they noticed attrition. The remaining six participants (four simultaneous and two sequentials) were among the lowest ranking scores in sample population (see Table 76 and Table 77 below).



Table 76: Attrition: simultaneous bilinguals

| Participant | Age bracket | Overall ranking  |  |
|-------------|-------------|------------------|--|
| Sim23       | 28-32       | 29 <sup>th</sup> | I thought the Italian would be easy but instead it was the hardest. I had a few moments where I <b>couldn't find the right word in Italian</b> . Maybe I've spent too long here! It's what I was saying before: sometimes I can't find words that should be easy to find. <b>At the moment</b> I find it <b>easier finding words in English</b> .  |
| Sim19       | 23-27       | 39 <sup>th</sup> | When I was <b>younger</b> I felt more bilingual in both because I would spend my <b>whole summers in Italy</b> so <b>out of instinct</b> I would speak Italian. Since the age of 16 I haven't been going to Italy as much so <b>it's definitely getting a bit lax</b> now. Definitely native English speaker with Italian, rather than 100% bilingual.   |
| Sim16       | 23-27       | 42 <sup>nd</sup> | My mother is Spanish. I have grown up and spent my whole life in Ireland. My mother encouraged us to speak Spanish and we would have gone to Spain every year for about four to five weeks at a time. I <b>would have been speaking to my Spanish family predominantly through Spanish</b> . I wasn't great at speaking Spanish from the age of <b>four to mid-way through secondary school</b> because I didn't have much of an interest in it. In secondary school I developed for of an interest in it and used it on a more daily basis. <b>Over the last couple years</b> I really <b>only speak Spanish whenever I'm in Spain</b> . I <b>never speak to my mother in Spanish</b> because we've got to where we talk in English and even if I talk to her in Spanish she'll answer me in English.   |
| Sim15       | 23-27       | 45 <sup>th</sup> | Every summer until I was about <b>18</b> we went to Spain for two or three weeks. My mum has always spoken to me in Spanish but very colloquially, like 'pon la mesa'. I've always responded in English. It's a pity because I have <b>lost a lot of Spanish</b> . When I <b>lived in Seville in fourth year</b> I came back with a lot of Spanish because I was there for <b>a long time</b> but living in a country where everything is in English means you <b>just lose</b> it. I don't think I have the level of Spanish to be able to translate simultaneously. It takes me a long time to process information and then to feed it out. My languages are definitely behind two separate doors but when the Spanish door is open I'll <b>never lose the English</b> . If I'm in Spain for a month or two months I have it and I can dominate them both but when you live in a country where it's all in English the <b>Spanish door closes and gets rusty</b> . I'm getting quite nostalgic, if that's the word to use, because it is a bit sad that my mother is Spanish and I should be bilingual. They don't say 'mother's tongue' for no reason. I'm asking myself if this is a missed opportunity. It's nothing new but it's a realisation of the fact that I should be better at Spanish. If I was to compare myself to someone like me I would think I was actually doing quite well but when I compare myself to real bilinguals then I don't feel very good. |

*Table 77: Attrition: sequential bilinguals*

| Participant | Age bracket | Overall ranking  |  |
|-------------|-------------|------------------|--|
| Seq16       | 23-27       | 22 <sup>nd</sup> | I would say translating will be hard because <b>I lack vocabulary</b> . The idea of interpreting is hard for me. At some stage I will get <b>stuck</b> with one word and be like 'How do you say this?' After the practice, I think English into Spanish will be easier for me. I don't know why. I don't know which of the two languages I am more dominant in now because I'm using English all the time. I should find Spanish easier but <b>I've been here a long time</b> and I use English more. I find writing in Spanish very difficult because I don't have any vocabulary in Spanish <b>anymore</b> . <b>Whenever</b> I'm in Spain I say the same thing about English, though! I'm surrounded by English so whenever I get stuck I <b>try to translate it</b> into Spanish, while if I'm stuck when speaking English I will <b>go around until I find the way</b> but I would very rarely translate it from Spanish. |
| Seq11       | 23-27       | 47 <sup>th</sup> | <b>I need to practise Spanish!</b> I'm the only person in my family to speak Spanish at home and none of my friends speak Spanish. I did it as a career choice to speak Spanish so I don't have much knowledge in world vocabulary. I wouldn't know how to say certain things if they don't come up in a classroom setting, especially if they're words that don't get used very often. <b>If I kept up-to-date</b> with my Spanish it would have been better but I don't have that at home so I don't have the luxury of speaking Spanish all the time.   |

Only one of these six participants was in the 28-32 bracket and he came fifth out of nine. The remaining five were in the 23-27 age bracket and one of them failed the SI tasks entirely. A small number of participants across the age brackets, then, perceived weaknesses in their SI performance attributed to ageing and attrition but these perceptions were not found to have consistently affected their performances. However, the fact that both simultaneous and sequential bilinguals referred to ageing and attrition indicates an awareness of a changing bilingual profile over time.

#### **6.4.7 Comparing Raw Scores with Current Age of Participants.**

The issue of current age of the participants raised in 6.4.6 is further clarified in this section in Table 78.

**Table 78: Comparing overall order of participants ranked 1-24 by average (%) in the two SI tasks with current age**

| Ranking | Participant | Overall average (%) | Current Age brackets |   |   |   |   |   |   |   |   |   |
|---------|-------------|---------------------|----------------------|---|---|---|---|---|---|---|---|---|
|         |             |                     | A                    | B | C | D | E | F | G | H | I | J |
| 1       | Sim18       | 91%                 |                      |   | ■ |   |   |   |   |   |   |   |
| 2       | Seq6        | 86%                 |                      |   |   |   |   |   |   | ■ |   |   |
| 3       | Seq20       | 84%                 |                      |   |   |   |   | ■ |   |   |   |   |
| 4       | Seq7        | 83%                 |                      |   |   |   |   |   |   |   | ■ |   |
| 5       | Sim10       | 83%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 6       | Seq4        | 78%                 |                      |   |   |   |   |   |   |   |   | ■ |
| 7       | Sim20       | 77%                 |                      |   |   |   |   |   |   | ■ |   |   |
| 8       | Seq23       | 75%                 |                      |   |   |   |   |   |   |   | ■ |   |
| 9       | Sim11       | 74%                 | ■                    |   |   |   |   |   |   |   |   |   |
| 10      | Sim5        | 74%                 |                      |   | ■ |   |   |   |   |   |   |   |
| 11      | Seq12       | 74%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 12      | Seq13       | 74%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 13      | Seq14       | 73%                 |                      |   |   |   |   |   | ■ |   |   |   |
| 14      | Seq17       | 72%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 15      | Seq10       | 72%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 16      | Seq18       | 71%                 |                      |   |   | ■ |   |   |   |   |   |   |
| 17      | Sim12       | 68%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 18      | Sim17       | 68%                 |                      |   | ■ |   |   |   |   |   |   |   |
| 19      | Seq21       | 68%                 |                      |   |   |   |   |   | ■ |   |   |   |
| 20      | Sim13       | 67%                 |                      |   |   | ■ |   |   |   |   |   |   |
| 21      | Seq9        | 66%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 22      | Seq16       | 66%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 23      | Sim22       | 62%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 24      | Seq3        | 61%                 |                      |   |   |   | ■ |   |   |   |   |   |

**Table 79: Comparing overall order of participants ranked 25-48 by average (%) in the two SI tasks with current age**

| Ranking | Participant | Overall average (%) | Current Age brackets |   |   |   |   |   |   |   |   |   |
|---------|-------------|---------------------|----------------------|---|---|---|---|---|---|---|---|---|
|         |             |                     | A                    | B | C | D | E | F | G | H | I | J |
| 25      | Sim24       | 60%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 26      | Seq19       | 60%                 |                      |   | ■ |   |   |   |   |   |   |   |
| 27      | Sim3        | 59%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 28      | Sim4        | 58%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 29      | Sim23       | 57%                 |                      |   | ■ |   |   |   |   |   |   |   |
| 30      | Sim6        | 57%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 31      | Seq2        | 57%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 32      | Seq8        | 56%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 33      | Sim2        | 54%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 34      | Seq24       | 52%                 |                      |   |   |   |   |   |   | ■ |   |   |
| 35      | Seq5        | 50%                 |                      |   |   | ■ |   |   |   |   |   |   |
| 36      | Sim21       | 45%                 | ■                    |   |   |   |   |   |   |   |   |   |
| 37      | Sim8        | 44%                 | ■                    |   |   |   |   |   |   |   |   |   |
| 38      | Sim1        | 43%                 | ■                    |   |   |   |   |   |   |   |   |   |
| 39      | Sim19       | 38%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 40      | Seq15       | 38%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 41      | Sim9        | 31%                 | ■                    |   |   |   |   |   |   |   |   |   |
| 42      | Sim16       | 31%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 43      | Sim14       | 30%                 |                      |   |   | ■ |   |   |   |   |   |   |
| 44      | Seq1        | 28%                 |                      |   |   |   |   |   |   | ■ |   |   |
| 45      | Sim15       | 23%                 |                      | ■ |   |   |   |   |   |   |   |   |
| 46      | Sim7        | 21%                 | ■                    |   |   |   |   |   |   |   |   |   |
| 47      | Seq11       | 0%                  |                      | ■ |   |   |   |   |   |   |   |   |
| 48      | Seq22       | 0%                  |                      |   |   |   |   |   |   | ■ |   |   |

Tables 78 and 79 document and compare the overall participant ranking with the current age of the participants at the time of taking the bi-directional SI tasks.

There are four main columns. In the first and second columns the participants are ranked 1<sup>st</sup> to 48<sup>th</sup>, the simultaneous participants shown by participant code in blue and the sequentials in orange. The third column gives the overall average percentage raw score and the fourth column designates the approximate current age each of the 48 participants. There are 10 age brackets, from age 18 to age 67, as indicated in Table 4.

The full tables can be analysed as follows: there is only one participant in each of the brackets E and F so no significant conclusions can be drawn from those sub-columns. It can be seen, however, that out of the six oldest participants, aged between 53 and 67, sub-columns 7-10, one sequential came last and the other five, one simultaneous and four sequentials were in the top eight. In the lowest age bracket, 18-22, sub-column 1, there were again six participants, one of whom was 9<sup>th</sup> and the other five lying between 36<sup>th</sup> and 46<sup>th</sup> place. All were simultaneous bilinguals. Taken together these findings suggest that there was a slight tendency for the very oldest participants, predominantly sequentials, to perform very well and the very youngest, all simultaneous, to perform most badly. This accounts, however, for only 12 out of the 48 participants, i.e. 25%.

Brackets C and D taken together (age 28-37) show nine participants ranging from 1<sup>st</sup> to 43<sup>rd</sup> place, six simultaneous bilinguals and three sequentials. This shows a broader spread across all raw scores.

The most significant information can be gained from age bracket B, the 21 participants aged between 23 and 28, where the broader spread is more fully evidenced. This bracket accounts for 43.8% of the total participants. It shows the range from 5<sup>th</sup> to 47<sup>th</sup> place and is composed of eleven simultaneous and ten sequential bilinguals. It shows clearly that for this age group, current age when performing the SI tasks set by this study had no bearing on placing in the ranking table. The colour-coding also reiterates the point made in the analysis of Figures 9, 10 and 11 that sequential and simultaneous bilinguals in general were spread evenly across the raw score range. Just as AoA, then, does not seem to have been the determining factor in the quantitative findings, neither does participant current age appear to have any bearing on their performance or give any advantage to either group when the performance scores were taken into consideration

#### **6.4.8 Conclusion to Key-Theme 2**

Section 6.4 of this chapter has presented the second of the two key themes which emerged as a result of the Think-Aloud Protocols: Language Storage, Access and Retrieval. It began by exploring the five ways in which participants commented they felt their languages were stored: separately, separately with crossover, in the same place, 'there' and according to experience, domain or interlocutor. Simultaneous and sequential participants were to be found in all five locations. Two simultaneous bilinguals reported greater fluidity in moving between their two languages and easier access to each when needed, as noted in the examples highlighted. Nevertheless, it should be underscored that, despite the feelings of these participants that retrieval was easier for them, their scores did not support their perception. Recent usage, geographical location, current language proficiency, current order of dominance of L2s, language or context of encoding were all perceived by both simultaneous and sequential bilinguals to play a role in influencing their retrieval and therefore their SI performance. Finally, the chapter outlined the two additional factors perceived by the participants to affect SI performance: ageing, highlighted only by sequentials, and attrition, highlighted by both simultaneous and sequential bilinguals. Neither factor was found to have consistently influenced the participants' performance.

#### **6.5 Conclusion**

This chapter has presented the qualitative findings of this research project. The two key themes of (1) the Bilingual Self and (2) Language Storage, Access and Retrieval which emerged from the Think-Aloud Protocols have been analysed. The Bilingual Self was perceived by both simultaneous and sequential bilinguals to consist of an evolving personal profile influenced by a number of factors: historic and current language usage, mode of acquisition of their two languages, i.e. by domain, topic or interlocutor, and current country of residence or frequency of travel to the country where their other language is spoken. As far as Language Storage, Access and Retrieval was concerned, little discernible difference could be detected in the way each group perceived the relationship between their two languages within one mind and how these were managed in order to perform the SI task. Simultaneous and sequential bilinguals alike envisaged their languages in each of the bilingual storage locations. One minor difference was noted between the simultaneous and sequential groups in retrieval

strategies: the simultaneous bilinguals noted greater ease of retrieval in general than the sequential bilinguals. Both the simultaneous and the sequential bilinguals attributed their performance in the bi-directional SI tasks to their individual bilingual profiles which, along with age of acquisition, were attributable to a similar group of factors as noted above: recent usage, geographical location and acquisition by domain and interlocutor. The next and final chapter in this thesis will respond to the project's three research questions by drawing on the findings from both the quantitative and qualitative data sets.





# Chapter 7: Discussion

## 7.1 Introduction

This chapter synthesises and discusses the quantitative and qualitative findings from Chapters 5 and 6. The first two sections respond to the first two research questions. The quantitative dataset demonstrated that (1) the simultaneous bilinguals did not outperform the sequential bilingualism in the SI task, whilst the sequential bilinguals outperformed the simultaneous bilinguals in one direction of SI: into FRESIT, and (2) the sequential bilinguals outperformed the simultaneous bilinguals at category level in a combination of both directions of interpreting. In this study, Age of Acquisition does not appear to be the defining factor in the performance of the simulated bi-directional tasks. In the third section, participants' predictions regarding the bi-directional tasks are compared with their actual scores. The fourth section responds to the third research question, drawing on the data collected by the Think-Aloud Protocols. The final two sections synthesise the quantitative and qualitative findings and highlight the similarities, rather than the differences, between the two groups of participants, drawing attention to the importance for both groups of a personal and unique individual language profile.

## **7.2 Research Question 1: Do adult simultaneous bilinguals outperform adult sequential bilinguals in simulated experimental bi-directional simultaneous interpreting tasks?**

The data in Chapter 5 (Sections 5.4 and 5.5) demonstrate that the adult simultaneous bilinguals in this sample population did not outperform the adult sequential bilinguals in the simulated experimental bi-directional simultaneous interpreting tasks.

The results from the overall raw average scores (the average of the two scores of the results from the task into English and the task into FRESIT) demonstrated in Section 5.4 that the sequential bilinguals outperformed the simultaneous bilinguals. The sequential bilinguals obtained an average score of 60%, whereas the simultaneous bilinguals obtained an average score of 55%. There was less

consistency in the simultaneous bilinguals' scores, with their average score into English (61%) considerably higher than their average score into FRESIT (48%). The sequential bilinguals showed more overall consistency, with an average score into English of 60% and an average score into FRESIT of 60%, giving an overall average score of 60%. As the normality test was skewed, a *t*-test could not be performed and the Mann-Whitney U test did not find any significant difference between the two groups. In terms of overall scores, therefore, this study did not find that the simultaneous bilinguals outperformed the sequential bilinguals, there being no significant difference between the overall average performance of the two groups in the task as a whole.

Since the SI task was performed bi-directionally and therefore consisted of two tests – one interpreting from FRESIT into English and the other interpreting from English into FRESIT – the study looked next at the performance in each direction separately.

The raw scores in the SI task into English demonstrated that the performance of the simultaneous and sequential bilinguals was very similar: the spread of results for the simultaneous bilinguals was 0-97% and 0-93% for the sequentials. Three individuals failed this task: one simultaneous and two sequential bilinguals. The bi-directional scores for interpreting into English found that the two groups were almost equally matched and no statistically significant difference was reported when a *t*-test was performed (Section 5.5.1).

In terms of the raw scores from the SI task from English into FRESIT, the sequential bilinguals outperformed the simultaneous bilinguals and the spread of scores was lower and closer: 0-85% for the simultaneous bilinguals and 0-86% for the sequential bilinguals. There were more failures in this task: four simultaneous and three sequential bilinguals. When a Mann-Whitney U test was performed, a significant difference was reported, with the sequentials outperforming the simultaneous bilinguals, and a small effect was found (Section 5.5.1).

To summarise, in response to RQ1, the inferential statistics found that neither group outperformed the other when the overall scores were taken into consideration but when the SI tasks into English and into FRESIT were evaluated separately, the sequential bilinguals outperformed the simultaneous

bilinguals interpreting from English into FRESIT and a small effect was reported.

### **7.3 Research Question 2: In which categories do adult simultaneous bilinguals outperform adult sequential bilinguals (or vice versa)?**

The data demonstrated that the sequential bilinguals in this sample population outperformed the simultaneous bilinguals at category level, rather than simultaneous bilinguals outperforming sequential bilinguals.

The raw scores showed that in the SI task from FRESIT into English (Section 5.5.2.1), the simultaneous bilinguals outperformed the sequential bilinguals in the following five categories

1. mispronunciations
2. grammatical mistakes
3. source language interference
4. accent
5. idiomatic rendering of language

The raw scores showed that the sequential bilinguals outperformed the simultaneous bilinguals in the following eight categories:

1. non-sequiturs
2. unfinished sentences
3. serious omissions
4. additions
5. fillers
6. unnatural intonation
7. corrections
8. how convincing they were as an interpreter

Both groups scored equally in the ‘unjustified changes’ category. A small significant difference ( $p=0.046$ ,  $d=0.59$ ,  $r=0.28$ ) was found in category of ‘corrections’, where the sequential bilinguals outperformed the simultaneous bilinguals. Conducting Mann-Whitney U tests determined two statistically significant categories where the simultaneous bilinguals outperformed the sequential bilinguals: ‘mispronunciations’ (a moderate effect was found:  $U=174$ ,  $p=0.016$ ,  $r=-0.35$ ) and ‘accent’ (a large effect was found:  $U=107$ ,  $p=0.00$ ,  $r=-0.57$ ).

In the SI task from FRESIT into English (see Table 28 in Section 5.5.5.1), there was a statistical difference between the two groups, with the simultaneous bilinguals outperforming the sequential bilinguals in the following categories:

- accent (large effect)
- mispronunciations (moderate effect)

There was a further statistical difference between the groups, with the sequential bilinguals outperforming the simultaneous bilinguals in ‘corrections’ (small effect).

Turning to the SI task which was performed from English into FRESIT, the raw scores showed that overall, the simultaneous group outperformed the sequential group in the category of ‘fillers’.

The sequential bilinguals outperformed their simultaneous counterparts in the following 13 categories:

- non-sequiturs
- unfinished sentences
- serious omissions
- unjustified changes
- unjustified additions
- unnatural intonation
- corrections
- how convincing they were as an interpreter
- mispronunciations
- grammatical mistakes
- source language interference
- accent
- idiomatic rendering of language.

When carrying out the *t*-tests, a significant difference was found in the ‘grammatical mistakes’ category, where the sequential bilinguals outperformed simultaneous bilinguals and a moderate effect was reported. Significance was also found using Mann-Whitney U tests in ‘corrections’, where the sequential bilinguals outperformed the simultaneous bilinguals and a moderate effect was found; ‘mispronunciations’: the sequential bilinguals outperformed the simultaneous bilinguals and a moderate effect was reported; and ‘accent’: the sequential bilinguals outperformed the simultaneous bilinguals and a moderate effect was found.

In the SI task from English into FRESIT (see Table 29 and Table 30 in Section 5.5.5.2), therefore, there was a statistical difference between the two groups, with the sequential bilinguals outperforming the simultaneous bilinguals in the following categories:

- grammatical mistakes (moderate effect)
- corrections (moderate effect)
- mispronunciations (moderate effect)
- accent (moderate effect)

There was no category in which there was a statistical difference whereby the simultaneous bilinguals outperformed the sequentials in this direction.

To summarise, in response to RQ2, the sequential bilinguals outperformed the simultaneous bilinguals at category level as follows: the inferential statistics applied to the 14 different categories in both SI directions found that the sequentials outperformed the simultaneous bilinguals in four categories into FRESIT, all with a moderate effect, and in one category into English, with a small effect. This was superior to the simultaneous bilinguals, who outperformed the sequential group in two categories, with one moderate and one large effect.

#### **7.4 Participant predictions regarding bi-directional tasks compared with their actual scores**

In Chapter 5 (Section 5.6.1), individual participants' pre- and post-task predictions regarding the SI task into English and the SI task into FRESIT were compared with the actual scores they received. The data showed that:

- (1) participants' pre-task predictions were more accurate than their post-task predictions;
- (2) participants tended to change their prediction following the SI task.

Participants predicted their directionality scores more accurately prior to completing the tasks. After performing the tasks in both directions, however, 22 out of 45 non-balanced participants changed their mind and only eight of them, two simultaneous and six sequentials, were then found to be correct to have done so. There was no significant difference between the accuracy of predictions: 60%

of simultaneous bilinguals were accurate in their predictions, 62% of sequential bilinguals were accurate in their predictions.

### **7.5 Research Question 3: Are there any differences in perceptions between the simultaneous and sequential bilinguals in terms of language storage, linguistic dominance and directionality?**

Participants' perceptions regarding their bilingualism were collected through two different data instruments: the Bilingual Language Questionnaire (see Appendix 1), submitted prior to the day of testing, and the Think-Aloud Protocols, which took place immediately before and after the SI tasks. The qualitative dataset suggested no marked differences in the perceptions of the simultaneous and the sequential bilinguals in the areas of (A) language storage, (B) linguistic dominance or (C) directionality.

(A) Language storage: taking both groups together, participants reported that they felt their languages were stored in five different locations (see Sections 6.4.1 to 6.4.5):

1. separately
2. separately with crossover
3. in the same place
4. 'there'
5. location changes according to experience, domain or interlocutor.

One minor difference was noted in language access, as opposed to language storage (see Section 6.4.5), in that two simultaneous bilinguals reported greater fluidity in moving between their two languages and easier access to each when needed. That difference could have pointed to an intra-bilingual advantage to the simultaneous bilinguals in the performance of the SI tasks but in fact, as seen in Table 28 in Section 5.5.2.1, any significant advantage to the simultaneous bilinguals was in the categories of 'accent' and 'mispronunciations' and only in the task into English.

No difference in language retrieval from storage was described by the two groups of participants. Rather, both groups attributed ease or difficulty of retrieval to the same group of factors:

1. recent usage
2. geographical location
3. current language profile
4. language of interlocutor or context or language of encoding.

(B) Linguistic dominance: only three of the 48 participants in the research population perceived themselves to be balanced bilinguals. These three were all simultaneous bilinguals. The remainder of the sample, both simultaneous and sequential, perceived one of their languages to be dominant. Language dominance was expressed by both groups of participants as the key constituent in their bilingual identity as ‘interpreting bilinguals’ (Grosjean 1997: 168). In attempting to explain or account for their current non-balanced bilingual profile, both groups attributed this lack of balance to the same group of factors interrelating in complex ways: current usage in the domains of home, workplace/place of study and interlocutor, current country of residence or stays in countries where their languages were spoken.

Three simultaneous bilinguals made direct reference to the manner in which they acquired their two languages (see Table 50, Section 6.3.2), either by oral immersion or by direct schooling, again accentuating manner rather than age of acquisition. Both groups noted that their proficiency in their two languages is noticeably different in different registers, such as academic or informal situations

(C) Directionality: no differences regarding predictions of directionality in SI were found between the two groups. Participants from both groups identified unequal linguistic skill sets, acquisition by domain and current language use as factors which influenced their expectations or explained their performance in the bi-directional tasks.

Individual participants fell into one of two categories regarding predictions of directionality:

- (1) Those who expected that it would be easier working into their dominant language (B-to-A interpreting) and who attributed this to a stronger language skill set in their dominant language, which would make production easier. Some slight modifications in their expectations post-task did not significantly alter these views;
- (2) Those who expected that it would be easier working into their weaker language (A-to-B interpreting), who thought that their dominant language would be easier to process. They saw comprehension of the input as being of more importance but recognised that the output might be poorer in their weaker language. Most participants in this second category, however, had a change of mind after the experience of the bi-directional tasks and subsequently felt that they might perform better in B-to-A interpreting. This is the traditional position regarding directionality and was borne out by the analysis of the actual scores achieved by the 42 participants who could be assessed in the tasks in Chapter 5 (Section 5.6.2).

To summarise, in response to RQ3, no differences were found between the perceptions of the simultaneous and sequential bilinguals in any of the three categories of language storage, dominance and directionality.

## **7.6 Comparing the performance and perceptions of simultaneous and sequential bilinguals**

As reported above in the quantitative findings, this study did not find that the simultaneous bilinguals outperformed the sequential bilinguals, with no significant difference between the overall average performance of the two groups in the task as a whole. When the SI tasks into English and into FRESIT were evaluated separately, the sequential bilinguals did outperform the simultaneous bilinguals interpreting from English into FRESIT and a small effect was reported. At category level, the sequentials outperformed the



simultaneous bilinguals in four categories into FRESIT, all with a moderate effect, and in one category into English, with a small effect. Age of Acquisition cannot, therefore, be deemed to play a role in the bi-directional SI tasks performed by this cohort of participants.

In Section 5.6.1.1, in a closer analysis of the breakdown of the results of the bi-directional tasks, it was found that there was no discernible difference in the performance of simultaneous and sequential bilinguals regarding A-to-B - as opposed to B-to-A - interpreting. As can be seen from Tables 31 to 36, six participants could not be taken into consideration as three considered themselves to be balanced bilinguals, two failed the tests and one participant obtained an identical score in each direction. Of the remaining 39 participants, twenty-seven participants (13 simultaneous and 14 sequential) performed better interpreting into their dominant language from their weaker language (B-to-A). Fifteen participants (seven simultaneous and eight sequential) performed better interpreting into their weaker language from their dominant language (A-to-B). Age of acquisition does not appear to have been a contributing factor in this sample in determining whether participants performed better into their weaker or their more dominant language.

In the qualitative findings in Chapter 6 (Section 6.3.3), no detectable differences regarding perceptions about directionality predictions in SI were found between the simultaneous and sequential groups of the bilingual participants. Both simultaneous and sequential bilinguals together identified unequal linguistic skill sets, acquisition by domain and current language use as factors which influenced their expectations or explained their performance in the bi-directional tasks.

Also, when the issue of Directionality was approached from the viewpoint of whether simultaneous interpreting would be easier into the dominant or into the weaker language (Chapter 6, Section 6.3.3.1 and 6.3.3.2), simultaneous and sequential bilinguals were found in both groups. A majority of participants, both simultaneous and sequential bilinguals concluded that simultaneous interpreting was more easily performed into the dominant language. Both simultaneous and sequential bilinguals identified differing linguistic skill sets, acquisition by domain and current language use as factors which influenced their expectations or explained their performance.

Similarly, in terms of perceptions of language storage, as has been seen, the second theme discussed in Chapter 6 found that simultaneous and sequential participants alike reported their languages to be stored in five perceived main locations for storage: completely separate, separate with crossover, in the same place, ‘thereness’ and according to experience, domain or interlocutor. Language retrieval from storage was not perceived differently by the simultaneous and the sequential bilinguals. Both groups attributed ease or difficulty of retrieval to the same group of factors: recent usage, geographical location, current language profile, language of interlocutor or context or language of encoding.

What therefore is striking in this study is that there is more that unites the simultaneous and sequential bilinguals than separates them in the SI task. In the first theme, the Bilingual Self (6.3.1 and 6.3.2), there was an equal sense of reported anxiety and inadequacy amongst the simultaneous and sequential bilinguals. There was also a reported perception throughout the sample population that the true bilingual is the simultaneous bilingual, who is also assumed to be a balanced bilingual and that it is this bilingual who will perform better in SI performance. In fact, the three bilinguals who perceived themselves to be balanced, however, were placed 17<sup>th</sup>, 25<sup>th</sup> and 36<sup>th</sup> (see Table 80 below).

**Table 80: Ranking of the three self-perceived balanced bilinguals**

| Participant | Score into English (%) | Score into FRESIT (%) | Average score (%) | Ranking out of 48 |
|-------------|------------------------|-----------------------|-------------------|-------------------|
| Sim12       | 76.43%                 | 59.29%                | 68%               | 17 <sup>th</sup>  |
| Sim24       | 76.43%                 | 43.58%                | 60%               | 25 <sup>th</sup>  |
| Sim21       | 48.57%                 | 42.15%                | 45%               | 36 <sup>th</sup>  |

The Bilingual Self was perceived by both simultaneous and sequential bilinguals to consist of an evolving personal profile influenced by, *inter alia*, historic and current language usage, mode of acquisition of their two languages, current country of residence, frequency of travel to the country where their other language is spoken. Both the simultaneous and the sequential bilinguals attributed their performance in the bi-directional SI tasks to their individual bilingual profiles which, along with age of acquisition, were attributable to matters such as recent language usage, geographical location and acquisition by

domain and interlocutor. Whether they considered themselves balanced or dominant in one of their languages, what emerges is that participants described a changing personal bilingual profile that is always in flux, depending upon:

- Current order of dominance of L1/L2. Language dominance was perceived by both the simultaneous and sequential participants as the key constituent component of their bilingual identity;
- A complex acquisition of their two languages depending upon domain, topic and interlocutor and resulting in noticeably different capabilities of register (e.g. academic or informal) and non-overlapping lexicon;
- Unequal exposure to different domains across their languages and over their lifetime;
- Mode of acquisition of their two languages from the point of view of oral immersion or direct schooling/learning;
- Usage: historic and current, (predominantly home and workplace/place of study) with the emphasis on recency;
- Current language proficiency in both languages;
- Current country of residence (Ireland for all the participants) along with frequency or length of stays abroad in the other country where the bilingual's language is spoken;

## **7.7 Conclusion**

This chapter has discussed the findings presented in Chapters 5 and 6 and responded to the study's three research questions. The chapter has also highlighted the important similarities between the simultaneous and sequential bilinguals across the quantitative and qualitative findings and the importance of a unique and evolving individual bilingual language profile which was considered by participants to determining the quality of their performances in the bi-directional SI tasks. The final chapter of this thesis provides a conclusion to the study.



# Chapter 8: Conclusion

## 8.1. Introduction

This final chapter explores the study's findings within its theoretical framework and discusses the contributions the work hopes to make to the field, outlining the limitations and making suggestions for future research.

## 8.2 Research Framework

This doctoral study set out to investigate a prevailing assumption I observed in my work as a practising interpreter regarding the superiority of simultaneous bilinguals over sequential bilinguals as simultaneous interpreters. The objective of this thesis was to determine if adult simultaneous bilinguals perform better than sequential bilinguals in bi-directional SI tasks. As it proved impossible to test participants under booth conditions, I designed a simulation of the SI activity suitable for use in testing the bilingual population I was able to reach within the greater Dublin area.

Three research questions were posed in this thesis:

- 1) Do adult simultaneous bilinguals outperform adult sequential bilinguals in simulated experimental bi-directional simultaneous interpreting tasks?
- 2) In which categories do adult simultaneous bilinguals outperform adult sequential bilinguals (or vice versa)?
- 3) Are there any differences in perceptions between the simultaneous and sequential bilinguals in terms of language storage, linguistic dominance and directionality?

In order to answer these questions, I employed a theoretical framework which bridged the fields of interpreting and bilingualism. Where bilinguals in everyday life choose which language to use according to the situation in which they find themselves, interpreters do not have the same freedom of expression. They are strictly limited to a faithful rendering of the message of another, usually a conference delegate, to a listener who does not understand the language in which it is first formulated. Consequently, Grosjean's (1997: 168) distinction between the 'regular bilingual' and the 'interpreting bilingual' (*Ibid.*) drove the approach

employed in this study. Grosjean's Complementarity Principle Model (2008) provided the framework within which to explore the uniqueness of the individual profile and whether this, rather than age of acquisition, could lead to a possible advantage in SI. This model outlines how different domains can be seen to determine a bilingual's linguistic proficiency and how linguistic necessity will determine the level of fluency, explaining why bilinguals, simultaneous or sequential, are often not proficient in all domains in both languages, and therefore not necessarily good interpreters *per se*.

To my knowledge, no prior research has sought to compare the performance of simultaneous and sequential bilinguals in bi-directional SI. My expectation, as outlined in Chapter 1, was that the sequential bilinguals in this study would outperform the simultaneous bilinguals, contrary to some assumptions by members of the public, interpreting agencies and some bilinguals themselves. This was demonstrated in the response to RQ1, although the overall margin of difference in performance was small. Evidence is accumulating to support the approach that research on bilinguals must at all times take on board their identity as 'speaker-hearers' (Grosjean 2008: 13) in their own right and not in comparison with monolinguals and that experimental testing must take into account the individuality of each bilingual due to their personal and at times fluctuating language profile (Grosjean 2008). This lent support to the view that Age of Acquisition alone may not be the best lens through which to gauge superior performance in SI. A test such as SI by its very nature ensured that the participants maintained a bilingual mode at all times. This allowed bi-directional testing and access to performance data at category level in order to investigate aspects of SI outlined and described in Chapter 3.

The Think-Aloud Protocols to draw out the participants' perceptions of their performance on the test demonstrated that there was little difference in terms between the two groups of bilinguals. Both groups identified equally a particular set of issues along with – or other than – AoA which they perceived to contribute to a better or worse SI performance. This fits Grosjean's Complementarity Principle Model (2008), which defines the uniqueness of each bilingual profile by mode of acquisition rather than age of acquisition.

The quantitative findings at category level, in answer to RQ2, demonstrated that the simultaneous bilinguals outperformed sequential bilinguals in the categories of ‘accent’ and ‘mispronunciations’ in the task from FRESIT to English. This is in line with research by Uccelli and Pan (in Gleason and Ratner 2016), who argue that phonological elements in language are mastered by the age of 4. Hernandez *et al* (2005) in their Competition Model also envisage different mappings within the linguistic network for phonology. Berken *et al* (2017) note that sequential bilinguals in general display poorer native accent quality, which Amengual (2017) confirms more concretely in terms of L1 impact on L2 accent in English-speaking learners of Spanish. The large effect for ‘accent’ and the moderate effect for ‘mispronunciations’ into English may be attributed to the fact that, as per the questionnaire data, 71% per cent of simultaneous participants were born in an English-speaking country and 29% in a FRESIT-speaking country (Figure 6, Section 5.3.7) giving them an increased advantage in the task from FRESIT into English. The opposite was the case for the sequential bilinguals, 29% of whom were born in an English-speaking country and 71% in a FRESIT-speaking country (Figure 7, Section 5.3.7), leaving them at a disadvantage in this direction of interpreting.

The advantage demonstrated by sequential bilinguals in ‘corrections’ category, in the task from FRESIT to English, may be accounted for by superior processing skills in late learners, as suggested by Birdsong (2005) (Section 2.4). In order to compensate for the immersion from early childhood which simultaneous bilinguals have experienced, sequential bilinguals must adopt explicit learning techniques (DeKeyser and Larson-Hall 2005; Lenneberg 1967), for example, grammatical rules, and may therefore have been taught or adopted self-correction practices.

In the other direction, in the task from English into FRESIT, the advantage to the sequential bilinguals in ‘grammar’ and ‘corrections’, may again be explained by explicit learning strategies adopted by late learners, as in the paragraph above. The other two advantages to sequential bilinguals in ‘mispronunciations’ and ‘accent’ in the language other than English may be attributed to the same phonological factors listed above for the simultaneous bilinguals in the task from FRESIT to English, again taken along with data obtained from the questionnaire, namely the fact that 71% of the sequential bilinguals were born in a FRESIT-

speaking country and were educated largely there prior to their current residence in Ireland (see Figure 7, Table 13 and the Bilingual Language Questionnaire in Appendix 1). The moderate effect in both categories is attributable to the fact that English is not the majority dominant language of the sequential bilinguals. Eighteen out of 45 non-balanced participants perceived FRESIT to be their dominant language, one simultaneous bilingual and 17 sequential bilinguals (Section 5.6.1.1).

Turning to the qualitative findings, many participant perceptions were in line with aspects of the literature reviewed in Chapter 2 and 3. Both groups of participants, but especially simultaneous bilinguals, were aware of their profiles evolving over their lifetime, in line with the thinking of Grosjean (2010) and Skutnabb-Kangas (1981) as presented in Section 3.7. Participants also noted that there was unequal exposure to different domains across their languages and over time. This is again supported by Grosjean's Complementarity Model. In line with Hulstijn's (2015) concept of BLC and HLC as noted in Section 2.7, both simultaneous and sequential participants reported variability in language registers, the ability to converse in only one of their languages on certain topics, for example in work-related, or study-related domains. On directionality issues, the whole group, undistinguished by AoA, fell into one of the two categories recognised by the literature (for example, Seleskovitch 1978; Gile 2005), B-to-A or A-to-B interpreting, and echoed traditional and more current thinking on the advantages and disadvantages of interpreting into and out of the native language. One noteworthy observation came from Sim19, who, distinguishing between speed of interpretation and quality of production, reported that directionality is complex on different levels: she considered herself to be faster interpreting into her weaker language but the quality of her output was better when interpreting into her dominant language. This mirrors Williams (1995), who sees that different cognitive processes are taxed in each direction of SI, with outcomes of either greater fidelity to the source language, or more accurate output in the target language (Section 3.7) and also Chang and Schallert (2007), who point out that the close interplay between comprehension and production in SI often results in the A-language advantage and B-language disadvantage offsetting each other (Section 3.6).



It was in the context of memory and language storage, access and retrieval issues that I encountered for the first time a possible explanation of how the bilingual memory might operate at the processing stage of the overall SI activity and how retrieval might be elucidated by the latest connectionist thinking. On a basic level, easier retrieval if the language or context of encoding is the same as the language of retrieval, reported by both simultaneous and sequential bilinguals, is supported by the strong link now established between mode of acquisition and mode of retrieval as seen, for example, by Heredia and Cieřlicka (2014). The finding that storage was not perceived differently by the simultaneous and sequential bilinguals appears to contradict the older view of storage in the literature which divides bilinguals into compound, in other words, simultaneous bilinguals, and co-ordinate or sequential bilinguals (Gekoski 1980; Section 2.8). In that view, compound bilinguals were thought to store their languages interdependently, whereas co-ordinate bilinguals maintained independent stores. The findings in this study are in line with recent theories that view storage systems as more complex, for example, the evolving conceptual storage system such as suggested by Dong *et al.* (2013) and more particularly Cook's (2002a, 2003) integration continuum which allows for multiple types and degrees of interconnectedness and variations in storage possibilities both at language element level and at individual bilingual level (Chapter 2, Section 2.8). His concept that the continuum may apply in different ways to different bilinguals and at different stages of L2 acquisition is helpful and speaks directly to Grosjean's dictum that '[b]ilinguals usually acquire and use their languages for different purposes, in different domains of life, with different people' Grosjean (2008: 23).

However, while modelling of bilingual retrieval with specific reference to Simultaneous Interpreting remains as yet an open field of study, three elements which have emerged in this research when taken together may shed some new light on the complexity of the process that may be taking place in the mind of either type of bilingual as they perform an SI task: Rumelhart and McClelland's (1986) view of a network of simultaneous connecting stores within one single brain with the number of links dictating the ease of retrieval; Petri and Mishkin's (1994) suggestion that this type of connectionist system may co-exist with another behaviourist-type system

with differing circuitry, stores and rules and McClelland and Cleeremans' (2009) emphasis on changing mechanisms within the brain over time as it has developed and learned (Section 2.8). SI is a dynamic combination of language use and management. The reproduction of a speech in the target language which, by its very nature, demands retrieval of the best semantic equivalents at speed, may indeed require the activation of more than one system in the brain and depend on a combination of personal networks created by each individual bilingual experience, which go far beyond the distinction of Age of Acquisition, which was the brief of this thesis.

### **8.3 Contributions of this Study**

In pursuing the objective of the thesis, this study tested 24 simultaneous and 24 sequential bilinguals in order to explore the possibility of an intra-bilingual advantage in bi-directional simultaneous interpreting. This in itself broke new ground. It also necessitated a novel adaptation of the SI activity and included Think-Aloud Protocols, which allowed participants to contribute from their unique point of view. It expanded upon previous studies in Bilingualism to include the largely under-researched cohort of healthy adult non-immigrant bilinguals in the course of their working life. In researching this group, the aim was to contribute to research on bilinguals operating in bilingual mode in comparison with other bilinguals, as advocated by Grosjean, rather than with monolinguals, as is the predominant norm. Simultaneous interpreting by its nature ensures that sustained bilingual mode is maintained. It further contributed to the body of research on the individuality of the bilingual and to question if it might be more helpful to view any possible intra-bilingual advantage through a lens other than that of age of acquisition. This project also contributed to research on the under-explored issue of weaker languages in adult bilinguals and the debate on interpreting into the weaker language. Lastly, it contributed to the ongoing debates on language storage, dominance and directionality in bilingualism by opening up a window on the constraint of task-specificity which it will be necessary to apply in ongoing research into models of bilingual memory with specific application to the dynamic process of SI.

#### **8.4 Limitations**

It may not be possible to generalise the findings outside of this particular sample and apply them to the wider population due to the fact that it has such a small sample size and uses non-probability sampling. Ideally, the study would have recruited more participants in order to draw generalisable conclusions. It was not possible to acquire a large number of bilingual participants with the same language combination so within the total group of 48 there were 24 simultaneous bilinguals - eight French, eight Spanish and eight Italian and then 24 sequential bilinguals - eight French, eight Spanish and eight Italian. Although Ireland as a country is officially bilingual in English and Irish, Irish was not one of the languages in this study, as it was not a language I spoke fluently. The limitations in the work could be further addressed by obtaining a greater number of participants, all with one single bilingual language combination and more stringent eligibility criteria to exclude those whose proficiency did not match up to their self-assessments in the questionnaire (i.e. who would be likely to fail the SI task). The issue of unique bilingual profiles could be further addressed by comparisons in the SI performances of identical and fraternal bilingual twins which might significantly eliminate differences in biographical factors.

SI is a skill which interpreters-in-training work towards after other modes of interpreting have been mastered but it is also the only interpreting mode in which novices have not had any previous experience, allowing for a true test to be performed. Many participants did perform well in the tasks. The cost of hiring simultaneous interpreting booth equipment was prohibitive so the SI tasks had to be simulated in an office setting, which limited the research design. Whilst I was unable to provide a true listener for the SI tests, I created conditions to replicate this as best possible. Time constraints did not allow for a full assessment of rater performance. Each rater in each language produced scores extremely similar to the researcher's, but lack of time prevented an investigation of inter- and intra-rater reliability. This would be a useful avenue for future research to pursue.

#### **8.5 Conclusion**

It has been demonstrated in this thesis that Age of Acquisition does not appear to be sufficient in itself to determine performance in bi-directional SI tasks: the

bilingual's 'unique linguistic profile' (Baker 2011: 9) may be a more compelling lens through which to gauge an intra-bilingual advantage than age of acquisition itself. Grosjean's (2008) Complementarity Principle Model, exemplifying the unique individual bilingual profile, has been borne out in analysis after analysis. Thus, the thesis aligns with Grosjean's belief that interpreting requires 'regular bilinguals' (Grosjean 1997: 168) who have been accustomed to using their languages 'for different purposes, in different domains of life, with different people' (Grosjean 2008: 23) to 'learn to use their languages (and the underlying skills they have in them) for similar purposes, in similar domains of life, with similar people' (1997: 168). In other words, the functionality of the 'regular bilingual's' (*Ibid.*) two languages is seen to differ from the functionality of the 'interpreting bilingual's' (*Ibid.*) two languages, in the same way as the functionality of the bilingual's two languages was seen to contrast in the Introduction with that of a monolingual speaker of either language.

The simultaneous bilinguals in this research project did not outperform the sequential bilinguals in the overall SI task or in either direction of interpreting. The sequential bilinguals, in fact, outperformed the simultaneous bilinguals in one direction of interpreting and within the interpreting tasks the sequential bilinguals also outperformed the simultaneous bilinguals at category level. The Think-Aloud Protocols showed no differences in either group's concept of language dominance, language storage and retrieval or bi-directionality issues. This research project found no intra-bilingual benefit for the simultaneous bilinguals in the simulated experimental bi-directional SI tasks. It can give no support to the assumption that simultaneous bilinguals make better interpreters.



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# Appendices

## Appendix 1: Bilingual Language Questionnaire

### Bilingualism and Interpreting Study

This questionnaire is part of a study conducted by Alison Moore, a Ph.D. student in the School of Linguistic, Speech and Communication Sciences at Trinity College Dublin, Ireland. The study explores the bilingual's ability to interpret.



**Trinity College Dublin**  
Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin

### ABOUT THIS QUESTIONNAIRE

The questions below are grouped into several sections. Please read the instructions for each section, and bear in mind that there are no “right” or “wrong” answers.

Your answers will be confidential, and used only for the purpose of this research project.

Thank you very much for your time!

\*Parts of this questionnaire are drawn from the Marian *et al.* (2007) Bilingual Language Experience and Proficiency Questionnaire and the Montrul (2012) Bilingual background questionnaire for Spanish/English speakers.

1. Please list all the languages you know in order of ACQUISITION.

Type the names of your languages below in a list, starting with your native language(s) and including all the languages you know.

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2. Please list all the languages you know in order of DOMINANCE.

Type the names of your languages below in a list, starting with your most dominant language(s) and including all the languages you know.

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3. Where did you go to school?

Please tell me in which country/countries you attended primary school and secondary school.

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4. Did you speak both English and French before the age of 3? Tick all that apply.

- Yes
- No
- Not sure

5. What language(s) did you hear in your home between birth and the age of 3? Tick all that apply.

- English
- French
- combination of both
- \_\_\_\_\_ Other:

6. What language(s) did your parents tend to use when speaking to you during your childhood? Tick all that apply.

- English
- French
- combination of both
- \_\_\_\_\_ Other:

6. What language(s) did you tend to use when speaking to your parents during your childhood? Tick all that apply.

- English
- French
- combination of both
- \_\_\_\_\_ Other:

8. If you have siblings, what language(s) did you tend to use when speaking to them during your childhood? Tick all that apply.

- English
- French
- combination of both
- N/A
- Other:

9. What language(s) did your siblings tend to use when speaking to you during your childhood? Tick all that apply.

- English
- French
- A combination of both
- N/A
- \_\_\_\_\_ Other:

10. What language(s) did your grandparents tend to use when speaking to you during your childhood? Tick all that apply.

- English
- French
- combination of both
- \_\_\_\_\_ Other:

11. What language(s) did you tend to use when speaking with your grandparents during your childhood? Tick all that apply.

- English
- French
- combination of both
- \_\_\_\_\_ Other:

12. If you had a caregiver during your childhood, what language(s) did this caregiver use when speaking to you? By caregiver, I mean nanny, babysitter, au pair or other family member who took care of you on a regular basis. Tick all that apply.



- English
- French
- combination of both
- \_\_\_\_\_ Other:

13. What language(s) did you use when speaking to your caregiver? Tick all that apply.

- English
- French
- combination of both
- \_\_\_\_\_ Other:

4. Do you have any previous interpreting experience? Tick all that apply.

- Yes
- No

15. If yes, please provide details

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#### YOUR ENGLISH LANGUAGE BACKGROUND

This section asks you about the amount of time you've spent in an English-speaking environment.

16. In total, how many months/years have you spent in a country where English is spoken?

Mark only one oval.

- 0-6 months
- 6-12 months
- 1-3 years
- 3-5 years
- 5+ years

10+ years

17. In total, how many months/years have you spent in a family where English is spoken?

Mark only one oval.

- 0-6 months
- 6-12 months
- 1-3 years
- 3-5 years
- 5+ years
- 10+ years

18. In total, how many months/years have you spent in a school and/or working environment where English is spoken? Mark only one oval.

- 0-6 months
- 6-12 months
- 1-3 years
- 3-5 years
- 5+ years

10+ years

#### YOUR FRENCH LANGUAGE BACKGROUND

This section asks you about the amount of time you've spent in a French-speaking environment.

19. In total, how many months/years in total have you spent in a country where French is spoken?

Mark only one oval.

- 0-6 months
- 6-12 months
- 1-3 years
- 3-5 years
- 5+ years

10+ years

20. How many months/years have you spent in a family where French is spoken? Mark only one oval.

- 0-6 months
- 6-12 months
- 1-3 years
- 3-5 years
- 5+ years
- 10+ years

21. In total, how many months/years have you spent in a school and/or working environment where French is spoken? Mark only one oval.

- 0-6 months
- 6-12 months
- 1-3 years
- 3-5 years
- 5+ years

10+ years

#### YOUR EDUCATIONAL BACKGROUND: PRIMARY SCHOOL

The next questions ask you about your primary schooling and use of English and French. Primary school here refers to your education up to the age of 11 or 12.

22. Did you attend day-care or were you cared for at home before the age of 3? Tick all that apply.

- Yes
- No

23. What language(s) were spoken to you when in day-care/home-care? Tick all that apply.

- English
- French
- A combination of both
- \_\_\_\_\_ Other:

24. What language(s) did you use in day-care/home-care? Tick all that apply.

- English
- French
- A combination of both
- \_\_\_\_\_ Other:

25. What was the main language of instruction in your primary school? In other words, in which language or languages were you taught? This is sometimes described as the language of schooling.

---

26. Did you study ENGLISH as a foreign/second language in primary school? Tick all that apply.

- Yes
- No

27. If yes, how many hours per week of ENGLISH as a foreign/second language instruction did you receive in primary school? Tick all that apply.

- 1 hour or less
- 1-2 hours
- 2-5 hours
- 5-10 hours
- 10+ hours

8. Did you study FRENCH as a foreign/second language in primary school? Tick all that apply.

- Yes
- No

29. If yes, how many hours per week of FRENCH as a foreign/second language instruction did you receive in primary school? Tick all that apply.

- 1 hour or less
- 1-2 hours
- 2-5 hours
- 5-10 hours
- 10+ hours

30. Did you have any ENGLISH-speaking friends at primary school? Tick all that apply.

- Yes
- No

31. If yes, in which language did you usually speak with these English-speaking friends? Tick all that apply.

- English
- French
- Both
- \_\_\_\_\_ Other:

32. Did you have any FRENCH-speaking friends at primary school? Tick all that apply.

- Yes
- No

33. If yes, in which language did you usually speak with these French-speaking friends in primary school? Tick all that apply.

- French  
 English  
 A combination of both  
 \_\_\_\_\_ Other:

**YOUR EDUCATIONAL BACKGROUND: SECONDARY SCHOOL**

The next questions ask you about your secondary schooling, and use of English and French. Secondary school here refers to your education from about the age of 11 or 12 until age 18.

34. What was the main language of instruction in your secondary school?

In other words, through which language or languages were you taught? This is sometimes described as the language of schooling.

35. Did you study ENGLISH as a foreign/second language at secondary school?

Tick all that apply.

- Yes  
 No

36. If yes, approximately how many hours each week of ENGLISH as a foreign/second language did you receive at secondary school? Tick all that apply.

- hour or less  
 1-2 hours  
 2-5 hours  
 5-10 hours  
 10+ hours

37. Did you study FRENCH as a foreign/second language at secondary school?

Tick all that apply.

- Yes  
 No

38. If yes, approximately how many hours each week of FRENCH as a foreign/second language did you receive at secondary school? Tick all that apply.

- hour or less  
 1-2 hours  
 2-5 hours  
 5-10 hours  
 10+ hours

39. Did you have any ENGLISH-speaking friends at secondary school? Tick all that apply.

Yes

No

40. If yes, in which language did you usually speak with your English-speaking friends at secondary school? Mark only one oval.

French

English

A combination of both

\_\_\_\_\_ Other:

41. Did you have any FRENCH-speaking friends at secondary school?

Tick all that apply.

Yes

No

42. If yes, in which language did you usually speak with your French-speaking friends at secondary school? Mark only one oval.

French

English

A combination of both

\_\_\_\_\_ Other:

#### LANGUAGE PROFICIENCY, PREFERENCE AND USE

43. Please rate your FRENCH language proficiency Mark only one oval.

1      2      3      4      5      6      7

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Native-speaker or native-speaker-like proficiency                              Very limited proficiency

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44. Please rate your ENGLISH language proficiency Mark only one oval.

1      2      3      4      5      6      7

---

Native-speaker or native-speaker-like proficiency                           Very limited proficiency

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45. If you speak a third language, please rate your language proficiency in this language Mark only one oval.

|   |   |   |   |   |   |                          |
|---|---|---|---|---|---|--------------------------|
| 1   | 2 | 3 | 4 | 5 | 6 | 7                        |
| Native-speaker or native-speaker-like proficiency |   |   |   |   |   | Very limited proficiency |
|   |   |   |   |   |   |                          |

46. If you could choose freely which language to use most in your daily life, would you choose to use French or English? Tick all that apply.

- French
- English
- It would depend with whom I'm talking
- A combination of both

47. Would you describe FRENCH as a first (native) language or as a second language for you? Tick all that apply.

- French is a first (native) language for me
- French is a second language for me

48. Would you describe ENGLISH as a first (native) language or as a second language for you? Tick all that apply.

- English is a first (native) language for me
- English is a second language for me

49. Which statement best describes you? Tick all that apply.

- I'm a native English speaker with proficient French
- I'm a native French speaker with proficient English
- I'm a native speaker of both French and English
- \_\_\_\_\_ Other:

50. How often do you use FRENCH in your daily life right now with friends/family? Tick all that apply.

- Always
- Very often
- About half the time
- Only occasionally
- Never

51. How often do you use ENGLISH in your daily life right now with friends/family? Tick all that apply.

- Always
- Very often
- About half the time
- Only occasionally
- Never

52. How often do you listen to music/podcasts/radio in FRENCH? Tick all that apply.

- Often
- Sometimes
- Seldom
- Never

53. How often do you listen to music/podcasts/radio in ENGLISH? Tick all that apply.

- Often
- Sometimes
- Seldom
- Never

54. When you browse the internet, how likely are you to use FRENCH as your preferred language? Tick all that apply.

- Very likely
- Somewhat likely
- Unlikely

55. When you browse the internet, how likely are you to use ENGLISH as your preferred language? Tick all that apply.

- Very likely
- Somewhat likely
- Unlikely

56. Please tick the statement that best applies to you when watching television/films at the moment. Tick all that apply.

- usually prefer to watch English-language television/films
- I usually prefer to watch French-language television/films
- I like to watch both French-language and English-language television/films
- I don't really have a language preference when it comes to watching television/films, any language is fine

57. Please tick the statement that best applies to you when describing the language(s) you use at work. Tick all that apply.



- Almost all of my working week is spent using English
- I use English to a considerable degree during my working week
- I occasionally use English during my working week
- I don't use English at all during a typical week at work
- I don't use French at all during a typical week at work
- I occasionally use French during my working week
- I use French to a considerable degree during my working week

Almost all of my working week is spent using French

58. If you are studying at the moment, which language(s) do you use in your coursework? Tick all that apply.

- French
- English
- A combination of both
- \_\_\_\_\_ Other:

#### SOME FINAL DETAILS

Thank you for taking the time to answer these questions about your language background, preferences and use! Just a few more questions to help me analyse your response. Please note that your name and age will not appear in any part of the study.

59. My full name. This will be replaced by an alphanumeric code in the research project.

\_\_\_\_\_

60. My age (approximately!) Mark only one oval.

- 18-22
- 23-27
- 28-32
- 33-37
- 38-42
- 43-47
- 48-52
- 53-57
- 58-62
- 63-67
- 68-72

73+

I identify my gender as: Tick all that apply.

- Female
- Male
- Trans

61. My place of birth:

---

62. My current occupation:

---

63. My highest level of educational attainment: Tick all that apply.

- Primary school
- Secondary school
- Professional training/diploma
- Undergraduate degree
- Masters (taught)
- Masters (research)
- PhD

Other:

That's it - and thank you! If you would like to make any comments about the issues addressed in this questionnaire, please feel free to write them below. I appreciate the time you took to respond to this survey!

Researcher: Alison Moore. Email address: moorea10@tcd.ie

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**Appendix 2: Adapted Version of Schjoldager's (1996) Rubric for Assessing the SI Tasks**

|   |  |
|---|--|
| <b>Assessment Criteria</b>  | <b>Candidate:</b> _____<br><b>Total:</b> _____ |
| <b>Coherence and plausibility</b>   |  |
| Does the interpretation make sense as a whole?<br><br>If it does not make sense as a whole, circle No. Please do not proceed with the rest of the evaluation. | Yes<br><br>No                                  |
| 1. Rate the impact of any non-sequiturs on a scale from 1-5.<br><br>1 = considerable impact, 5 = no non-sequiturs   | 1      2      3      4      5                  |
| 2. Rate the impact of any unfinished sentences.<br><br>1 = considerable impact, 5 = no unfinished sentences   | 1      2      3      4      5                  |
| <b>Faithfulness</b>   |  |
| 3. Rate the impact of any serious omissions.<br><br>1 = considerable impact, 5 = no unjustified omissions   | 1      2      3      4      5                  |
| 4. Rate the impact of any unjustified changes.<br><br>1 = considerable impact, 5 = no unjustified changes   | 1      2      3      4      5                  |
| 5. Rate the impact of any unjustified additions.<br><br>1 = considerable impact, 5 = no unjustified additions   | 1      2      3      4      5                  |
| <b>Delivery</b>   |  |
| 6. Rate the impact of any fillers.<br><br>1 = considerable impact, 5 = no fillers used  | 1      2      3      4      5                  |

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| 7. Rate the impact of any unnatural intonation.<br><br>1 = considerable impact, 5 = no unnatural intonation                  | 1 | 2 | 3 | 4 | 5 |
| 8. Rate the impact of any corrections.<br><br>1 = considerable impact, 5 = no corrections made                               | 1 | 2 | 3 | 4 | 5 |
| 9. Overall, how convincing is the interpreter?<br><br>1 = unconvincing, 5 = convincing                                       | 1 | 2 | 3 | 4 | 5 |
| <b>Language</b>  |   |   |   |   |   |
| 10. Rate the impact of any mispronunciations.<br><br>1 = considerable impact, 5 = no mispronunciations                       | 1 | 2 | 3 | 4 | 5 |
| 11. Rate the impact of any grammatical mistakes.<br><br>1 = considerable impact, 5 = no grammatical mistakes                 | 1 | 2 | 3 | 4 | 5 |
| 12. Rate the impact of any source language interference.<br><br>1 = considerable impact, 5 = no source language interference | 1 | 2 | 3 | 4 | 5 |
| 13. Rate the impact of interpreter accent.<br><br>1 = considerable impact, 5 = no source language accent                     | 1 | 2 | 3 | 4 | 5 |
| 14. How accurately is idiomatic language rendered?<br><br>1 = very inaccurately, 5 = very accurately                         | 1 | 2 | 3 | 4 | 5 |
| <b>Total</b>   |   |   |   |   |   |



## Appendix 3: Ethics Approval



COLÁISTE NA TRÍONÓIDE, BAILE ÁTHA CLIATH | TRINITY COLLEGE DUBLIN  
Ollscoil Átha Cliath | The University of Dublin

27/01/2015

**Application** HT 27 Academic Year 2014/15

**Applicant:** Alison Moore

**Title of Research:** The role of 'self' in bilingual interpreters

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Dear Alison,

Your submission for ethics approval for the research project above was considered by the Research Ethics Committee, School of Linguistic, Speech and Communication Sciences, Trinity College Dublin, on Tuesday, 27 January 2015, and has been approved in full. We wish you the very best in your research activities.

Best wishes,

**Dr Lorna Carson**  
**Chair, Research Ethics Committee**  
**School of Linguistic, Speech and Communication Sciences**  
**Trinity College Dublin**



An Léaráid Léinn Teanga agus  
Cumarsáide,  
Scoil na nEolaíochtaí Teangeolaíochta,  
Uirlabhra agus Cumarsáide,  
Coláiste na Tríonóide,  
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## Appendix 4: Transcriptions of Think-Aloud Protocols and SI Tasks (Participants 1-48)

### Sim1

#### Pre-Interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you: First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim1: sometimes I think I think in both at the same time. I would think about one word and feel like it's sprung back and forth if I need it in a language but if I was thinking and – like you said earlier – if I didn't have the word in English I'd just think of it in French and kind of keep going. Like in English exams I have written a French word by mistake if I thought I just felt it fitted better.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim1: Probably I'll be more accurate going from French into English because I have a bit more of a higher standard. I use English more often in school. The English we write in our Leaving Cert is much harder than the French I'd write in my French.

AM: Do you think there are any aspects that you might struggle with?

Sim1: Listening at the same time and maybe the maths. I think the maths will distract me.

AM: How are you feeling before you start the activity?

Sim1: Fine! Nothing in particular; not too stressed.

#### [Simultaneous interpreting from French into English occurs]

*Hello. I s'know in taking this talking that I'll be talking to youths so I've decided to talk to about a subject that would interest young people: Facebook. I will talk about Facebook in the waaay in a a violent way so you won't be disappointed. In the last few year, Facebook has taken a great importance. We have considered and Facebook itself has proclaimed that the media of that it is a social media eh site. When we go onto Facebook and eh familiarise ourselves with ... we ... Facebook for me is much more a me a site of exhibition that hides behind the mask of social media. Homo numericus on this eh website publishes eh you eh show your ideas insignificance and trivial without eeeeh any doubt of the way you explain yourself or the intellect behind it. The uh st uh a writing style is completely eh inexistent: you don't write on Facebook; you communicate. Or that's what we think. The writing lies finally on a collaborative work. We ... think ... eh for Facebook it's the contrary. We have to say directly in a few words without elaborating what we think about the subjects eh the biggest subjects. Communication has killed eh writing and if we say this we say as well that communication has killed communication. The law of Facebook is for me very eh indubitively that it's people of people practising being narcissistic and being ex and exhibiting themselves. They people like themselves a lot. They go ehh to the edge of the river and look at their portrait in the river. When you see the portraits that these people online put up online we can be ehm worried for this new form of narcissism as they're exhibiting themselves. Like ehm reality T, which is in reality, uhm it is a type of uh narcissim of TV and Facebook is just a sad face. A sad example.*

#### [Simultaneous interpreting from English into French occurs]

*Hello, my name is Pete Hughes. Oh, merde pardon et aujourd'hui je vais parler. Je peux imaginer euh que beaucoup de vous a visité Londres dans les quelques ans pour voir tous les euhm les choses touristiques à Londres comme le pont de touristes. Il y a plein de choses à faire, mais la question c'est comment tu arrives à ces places touristiques. C'est connu pour être euhm une ville très chère et ya beaucoup de voitures et euh faire le vélo c'est vu comme pas une très*

*bonne façon d'être euh sauf euh euh bien. Et maintenant les euh les gens de l'Angleterre sont pas très connus pour être euh heureux et eh tu peux voir ça euh dans le euh TG le train. Maintenant, il faut que tu connais à propos aller dans le train. Il faut avoir ton ticket prêt parce que ya plein de gens qui euh essaient de fuir dans les barrières et il faut que t'aïlles vite pour traverser et maintenant quand t'es t'as passé euh faire ton train maintenant il faut voir la bonne direction tu vas aller. Si tu vas aller à Piccadilly, pour Victoria, et chaque couleur il faut savoir quelle couleur de train tu vas prendre. Maintenant tu vas arriver à l'escalateur et c'est très important. Il faut que tu écoutes euh l'annonceur qui dit faut que tu es ou si t'es debout a droit ou à gauche il faut que t'écoutes ou tu vas pas être très populaire et quand t'arrives à la plateforme il faut que tu marches en bas la plateforme. Il faut pas rester. Ya beaucoup de gens qui rentent au tour de la plateforme et il faut que tu marches en bas. Ya plus d'espace et c'est plus simple de rentrer dans le train. Quand le train arrive dans la station, il faut que tu te mets en arrière pour laisser les autres descendre parce que si tu essayes rentrer il y a pas beaucoup d'espace et ça va causer de la tension entre les gens. Quand t'es dans le train tu peux t'asseoir si tu trouves de l'espace trouves un espace, mais euh si ya pas il faut euh marcher et trouver une espace, mais reste pas à la porte parce que il y a beaucoup de gens et il va pas y avoir de l'espace. Regard s'il y a des autres gens comme une un femme enceinte ou quelqu'un qui est vieux pour euh les trouver une place et c'est comme la réglul.. la régulation de l'être sur le train et après tu vas arriver à ta destination sans avoir de problèmes et tu peux être heureux ou enjoy !*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim1: I found it easier working into English because I had more words. The numbers didn't unsettle me too much. Just thinking about two things, I had to think more quickly, I guess.

AM: Do you think that this kind of activity would get easier with practice?

Sim1: Definitely.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim1: A little stressed. Just in the last one because it was too many things at once and my six multiples!

## Sim2

### Pre-Interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim2: Eh I found it easier I dunno if it was because I did the into English or listening to French first. It's easier to translate into French because I can understand the English and it's easier to just spew out the French. That's what I find.

AM: Do you think there are any aspects that you might struggle with?

Sim2: No, I think I'll probably be alright at the subjects and stuff like. I'm usually fairly good at switching off and just doing.

AM: How are you feeling before you start the activity?

Sim2: Good. The heart rate went way up on the first one but I'm alright now. I've calmed down. I'm fine. I've never done this before so it's kind of interesting. It's funny. It's weird. It's weird that it's easier into French but it kind of makes sense. Formal French is completely different to colloquial French. Completely different. I can't. I can barely read a newspaper article in French because it's completely.. it's all over the shop.

#### [Simultaneous interpreting from French into English occurs]

*Good evening. I know that in ta.. in speaking to you here I am speaking to young people and I decided to speak of a subject that will interest them particularly: particularly Facebook. I speak of Facebook in a way in a quite violent manner so you might you might be slightly disappointed because in the last few years Facebook has taken an extraordinary importance. Facebook has has has ne eh called itself social media. When we go on Facebook and we familiarselvesise with Facebook it it brings out eh a characteristic i in people. For me, Facebook is much more an exhibitionist media but that hides itself under a mask of sociability. The homo numericus on this eh social media it publishes its thoughts on the the most trivial thoughts the most insignificant thoughts without any worries without worrying about the quality of the of the pub of the publishings or the intellectual quality of what is being published. The the stylist the stylistic there is there is no style in the wr-writing of Facebook: it's just communication. The writing...writing is a thought-out subject and the opposite occurs on the social media of Facebook. It happens like directly in it...a few words without elaborating what we're thinking and on the most random of subjects. On Facebook, communication has killed writing and if we say that then we say we can also say that communication has killed communication and the law of Facebook for me is truly is truly that it it allows people to to be narcissistic and to be exhibitionist. Narcissism Narciss was a man who who really loved himself and looked at his portrait in the in the water in the edge of a water. When we see photos that people put onto Facebook we can only be worried this this this new form of narcissism is much more a form of exhibitionism and because time is running short and I'll tell you Facebook unfortunately is only a front and a s-sad front.*

#### [Simultaneous interpreting from English into French occurs]

*Bonjour, je m'appelle Peter Hughes et je suis britannique et aujourd'hui je vais vous parler de l'étiquette sur le le métro à Londres: le Tube. J'imagine que beaucoup de d'entre vous ayons visité Londres dans les dernières années pour visiter toutes les les sites touristiques de Londres comme Buckingham Palace et Big Ben et London Bridge. Il y a beaucoup de choses à à voir et à faire à Londres et la question se pose: comment on se déplace à Londres? Londres est aussi connu pour être une ville très très chère donc les taxis c'est hors de question pour se déplacer en a Londres à vélo c'est pas en général treeeeeees très sûr. Les les gens britanniques sont connus pour leur politesse dans dans les interactions sociaux et ça se voit sur le Tube dans les manières dont se ils se naviguent dans le dans le système. Pour se dépla... pour se bien se déplacer il faut se souvenir de ces de ces étapes. En arrivant au en en arrivant au à l'arrêt de*

*station donc prép... ayez votre billet à à portée de main pour pas empêcher les autres gens. En passant la barrière il faut être passer dans la bonne direction su-su-suivre les bonnes flèches les la flèche rouge pour euh la flèche euh oui sur la ligne Piccadilly il faut prendre la la bonne couleur de flèche et après vous arrivez euh au au au l'escalier roulant il faut il faut bien se tenir euh marcher à gauche et en arrivant au a la plateforme il faut bien s'assurer de descendre le le longueur de la plateforme pour pas bloquer la plateforme. Faut pas juste attendre. Ce sera plus facile de vous pour entrer dans le train quand il arrive. Dès que le déplacez-vous euh reculez un peu quand les gens pour laisser descendre les gens du train. Ça peut vraiment euh énerver les gens et créer de la tension. Quand vous arrivez dans le train, si vous avez si vous trouvez euh une fau une chaise prenez la chaise. S'il y avait pas de chaise et si [unintelligible] descendez dans le milieu du wagon. De gentil est ce serait gentil de donner votre chaise à des gens qui en ont besoin plus que vous: des femmes enceintes, des gens des personnes âgées. Avec chance, vous arriverez vous arrivez à votre destination.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim2: Ehm yeah. Yeah. Speed has a massive role, as I'm sure you know. I found it easier working into French but it's much faster so it makes it a bit trickier but it is easier working into French. I didn't find the maths particularly distracting because I'd already heard it once I knew it so you get a bit more detail into what you're saying. I don't know if I got anything right, though!

AM: Do you think that this kind of activity would get easier with practice?

Sim2: Yeah. 100%.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim2: No, not really. Because it's so quick you get behind very easily so then you're kinda sprinting to keep up or to catch up.

Sim3

### Pre-Interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim3: The two languages are stored in the same "area"(?) to me. It almost feels like both languages are made available to me and when thinking of a particular word or phrase the equivalent in the other language lingers in the "background" and I can tap into it seamlessly. Growing up speaking "franglais" kind of helped me develop the ability to switch from one language to another without having to think about it or actively start thinking in the other language.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim3: I'd say the maths might help me focus a little bit because when you're looking at elements which are visual you have a lot of images to take into consideration so if you cut out the visual element of it it makes it easier. It's easier for me to translate from French into English primarily because my vocabulary is better in English than it is in French and that's where a lot of the time I will stall in French because when I'm translating from English because I don't know the equivalent. That's where, for instance, a lot of pauses came in in the warm-up activity. Again, it was a new video so I didn't know the material but primarily it is the element of the translation from French into English which will be less of a problem than English to French from a vocabulary standpoint. Officially, I've spent more time in English-speaking environments: I was schooled on my life in English, bar primary school or preschool. Professionally now it's more of a French speaking environment. At the end of the day I'm still battling 24 years of schooling in English so English is my dominant language.

AM: Do you think there are any aspects that you might struggle with?

Sim3: I will do my best not to slip back into the term which is called Franglais, which is where you take English elements... English words and literally translate them. I'm not notorious for it in work but when I get tired that tends to be the biggest thing so if it's an element where I already know the text, the second time around will be a lot easier. I need to make sure that I stick truly to one language rather than getting a hybrid of both.

AM: How are you feeling before you start the activity?

Sim3: Good. A bit nervous. At the end of the day, I think everybody is, I think especially when they have a heart rate monitor on! I'm nervous and eager, I think, more so than anything else.

### [Simultaneous interpreting from French into English occurs]

*Hello. I know that by speaking here I'm addressing people young people so I've decided to speak a subject that interests that might interest them: Facebook. I'll speak a Facebook in a fairly violent way I think so you might be disappointed. These past few years, Facebook has taken an extraordinary eh importance in our lives. We have considered and Facebook has also auto-claimed a social media. When we go onto Facebook and become used to Facebook it becomes or it creates a ch- a personality a lot less appealing. Facebook for me is a lot more and media of exhibition or ex yeah which hides under the mask of socialisation or social society. What do we know more about this social media? Eh it publishes our most trivial thoughts our most insignificant thoughts without considering the means of expressing nor or as well as without any intellectual quality. The stylistic abilities are completely absent on Facebook. We don't write on Facebook: we communicate. At least that's what we think. Writing rests on the work of elaboration, we think. On social networks such as Facebook it's the opposite that organised: we have to tell them directly in a few words without elaborating what we think on the most ridiculous subjects. On Facebook communication's killed eh writing. If we say that communication has written or has killed writing we also say that communication has killed communication. The law*

of Facebook to me is that it allows for people to practise their narcissism and exhibitionism. Narcissus was fairly nice fairly friendly since he loved himself he went to the edge of a river looked at some self in the reflection to see the his reflection in the water. When we see the portraits that Facebook users post on Facebook we can only be worried. This new form of narcissism is a lot more a form of exhibitionism but as I'm running out of time all I'll say like such as reality TV, which is, in reality, the lack of or the absence of communication, Facebook is only a a mask and a sad one question mark?

### [Simultaneous interpreting from English into French occurs]

*Bonjour, je m'appelle Peter Hughes. Je suis anglais et aujourd'hui je vais vous parler de l'étiquette du métro à Londres en commençant mon s- mon discours maintenant. J'imagine que beaucoup d'entre vous avez eh que vous avez euh visité Londres pour voir les sites comme Buckingham Palace, Big Ben, euh London Bridge. Il y a énormément de trucs à faire et à visiter à Londres mais la vraie question comment vous y accéder. Euh Londres est très cher euh les taxis sont hors de question euh. A vélo c'est pas vraiment une façon euh... Les Anglais sont très connus pour euh leur euh leur bien-vivre euh la va la la façon bizarre de vivre. Euh on peut voir ça puisque la ver-façon de de bouger est assez [unintelligible]. La première...quand vous arrivez à la station de métro euh préparez votre ticket quand vous arrivez à la barrière parce qu'il y aura des personnes qui vont vouloir passer rapidement donc afin de ne pas les retarder encore plus. Une fois que vous passez les barrières il faudrait que vous fassiez attention de voir sur quelle ligne vous allez être que ce soit sur la rouge, la bleue fonce euh faut vraiment savoir quelle direction euh vous voulez prendre. Une fois que vous aurez arrivez à l'ascenseur ou euh les escaliers euh ça va vous dire de rester soit à droite ou à gauche. Ne faites pas la faute parce que ça va ça va vous faire vous rendre pas très populaire avec... Quand vous arrivez à la plate-forme il y a énormément de personnes qui euh se trouvent euh... essayez de de de ne pas rester juste à l'entrée de la plate-forme mais allez plutôt euh plus loin dans le quai pour que ça facilite les choses en montant le train. Quand le train arrive en gare faites en sorte de rester euh à part du enfin ne vous rapprochez pas trop de du train pour permettre aux gens de descendre. Une fois que vous êtes dans le métro euh si vous arrivez à trouver un siège asseyez-vous. Sinon euh si vous arrivez à vous asseoir dans un endroit de priorité euh faites en sorte de le donner à n'importe qui qui aurait besoin de ce siège, que ce soit une femme enceinte ou une personne âgée euh c'est une euh règle importante euh qui est implémenté qui est installée euh pendant votre voyage euh merci et j'espère que vous allez euh vous plaire pour le reste du voyage.*

### Post-Interpreting Think-Aloud Protocol

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim3: I expected my translations particularly into French to be a better than that but overall I'm fairly happy. Like you said, the perfectionist in me let's say in languages is unhappy but at the end of the day it was interesting. I know what to work on let's say if I ever want to become an interpreter! I didn't think I would have that much difficulty going in from English to French. My dominant language is English which is probably why I found it easier working into English. I mentioned earlier that my vocabulary is not as diverse or as broad in French and that showed up in this activity and again because I was hearing it in English my first natural thought was to throw it out in English with a French accent to try and link it or to make it sound French or try to find some kind of random synonym in English and transfer it into French. I found the maths helpful, particularly in English a lot more than for the one in French. I think I was so focused on what I was saying going from English to French that the maths was whenever I needed a break I resorted to the maths, whereas when I was going from French into English it felt more fluid. Granted, I didn't by any means fill up pages but it felt more fluid going from French into English and the maths actually helped: it was a distraction, I would say, and it helped me to focus on the job. I think this was in line with what I said I was expecting at the start.

AM: Do you think that this kind of activity would get easier with practice?

Sim3: Yes. Absolutely. Without a doubt! Yes yes yes! If I watched the videos a third time it would be even easier. Even if it's something you do professionally there's going to be an element that just switches on. One of my cousins studied in Sheffield and went on to become an interpreter in Strasbourg at the European Parliament. For her it's automatic. She works English to Russian or Russian to English but again it's one of those things where for her she's one of those freaks who is talented in every single language and it is easy for her.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim3: The nerves passed. I think at the end of the day the second time I heard it it was a lot easier than the first, particularly with the French into English. It was the same for the English into French. I think a lot of the English into French I was trying to catch up and trying to make the seamless transition from his words into my way of interpreting. I also speak slower, generally, so I was trying to speed up so that it was almost word for word, whereas at times with the French into English I felt that I was speaking at the same speed as the gentleman on the video. In terms of nerves, I think it was more trying to look for perfectionism rather than anything else. The way I look at it is that because I'm bilingual I expect myself to be near-perfect and the second one into French was not perfect. The nerves went the nerves definitely went, especially the second time around for both videos because I knew the context, I knew what they were talking about. I will admit that then in both cases that neither felt like 2 1/2 minutes. The first time: yes, the second time I was flying through. The nerves passed. Eagerness? I love this kind of thing, whether it's written or spoken. I absolutely adore translating and interpreting. In work I do it every day: I'm in charge of any proofreading and translating that we do. I will admit that the one bit of interpreting I have ever done properly was one of the most daunting tasks I've ever done and I'm so happy that the person I was interpreting for was French and understood English very well: she spoke well enough that when she was stuck I just helped. This was good; it was fun!

## Sim 4

### Pre-Interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim4: I would say they are quite separate - even though sometimes I'm in an environment where I'm speaking both French and English - because generally they are split. At home I speak French and then when I'm outside I speak English so they are quite separate and then when I'm in France obviously I speak French so there are very few situations where I'm in switching constantly between both. My girlfriend is always asking me how to say something in French and I won't know. Because we speak in English sometimes I try to speak French to her for a minute or two and see if it will trigger something. Generally it doesn't work; I still can't find it but I know I know the word. I can never find it. That's my English-speaking mode. I'm using English more often so I can access it faster.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim4: Into English definitely should be easier because my level of English is stronger than my level of French because I've been educated in English and I work in English. Apart from home, everything I do is in English. I was born and raised in both languages from birth but I feel that my English would be more dominant, even though I feel that I am bilingual in both.

AM: Do you think there are any aspects that you might struggle with?

Sim4: The vocabulary. I think you said the French one is about Facebook so maybe some of the technical terms and computers. Worries? Not really. I suppose it's just my first time interpreting simultaneously. I've done it before where someone spoke English and I've explained in French what was said but I've never done it simultaneously.

AM: How are you feeling before you start the activity?

Sim4: I'm a little bit apprehensive but it should be fun. It sounds like it should be fun but I'm still a little bit worried about how well I will do!

### [Simultaneous interpreting from French into English occurs]

*Hello. I know that when I speak here I am talking to yo-young people so I decided to talk about a subject that might interest them: Facebook. I will talk about Facebook in a manner that is quite violent or direct so you may be disappointed because these last few years Facebook has grown in importance. We have considered - and Facebook its proclaimed itself - a media a socialisation media so when we go on to Facebook and we get to know it we come out of it with qu-a different characteristic. Ffor me, Facebook is a lot more exit and media of exhibition that is hidden under the mask of socialisation. What does homo-numeric as do on this social media site? He publishes his thoughts, the most trivial thoughts, his most insignificant ideas without a worry about the quality of the manner of how he expresses them nor the quality the intellectual quality of those thoughts and the requirements of stylistic requirements are completely absent. One doesn't write on Facebook: one communicates. At least that is what we think. Writing is finally based on elaboration, we think, and I have the impression that for this social media like Facebook the opposite is true: you have to say directly in a few words without elaborating what do we think on the su-subjects the most incredible subjects. On Facebook, communication has killed literature and if we say that communication has wr-killed writing then then communication has killed communication. The law of Facebook is for me anyway is that it really per-permits people a lot more to practise their narcissism and their exhibitionism-ism. Narcissus was a nice guy because he liked himself so much he went to the edge of a river to look at himself in the river in the water but when we see the the portraits of what people on internet put on Facebook we can only be worried. This new form of narcissism is a lot more a form of exhibitionism but since time*



*is missing I will just say that, like reality television, which is actually nothing in terms of communication, Facebook is, unfortunately, just a facade and a sad facade.*

**[Simultaneous interpreting from English into French occurs]**

*Bonjour, je m'appelle Peter Hughes et aujourd'hui je vais parler de la la ligne le métro à Londres.. l'étiquette de métro. Donc, beaucoup de vous ont visité Londres pour euh voir ce qu'il y a à Londres, Big Ben, Buckingham, le Palace de Victoria. Il y a beaucoup de choses à voir à Londres, mais comment on y va? On sait que Londres est très cher donc les taxis sont très trop chers et le vélo est n'est pas très sûr comme moyen de voyage donc on prend le métro. Donc, les anglais sont un peu étranges quand ils savent les interactions sexuelles donc on voit ça dans le métro parce que c'est très important dans le métro. Donc, les choses qu'il y a à faire quand tu arrives à la station de métro: sois prêt avec ton billet pour la barrière donc il faut être prêt pour pas faire attendre les gens et une fois que vous êtes passé la barrière il faut savoir où on va. Est-ce que tu veux prendre la ligne rouge ou la bleue pour Piccadilly ou la l'autre couleur pour Piccadilly ? Quelle couleur est dans quelle direction? Et ensuite on va à l'esca à euh l'escalator. Faut s-attendre à droite et marcher à gauche donc faut respecter ces règles sinon on va pas être les gens vont pas être contents. Ensuite, il faut pas attendre à l'entrée; il faut se dépêcher pour bouger donc si vous euh descendez le le quai ça va être plus facile de trouver une place dans le métro quand il arrive. Donc, une fois que le métro est arrivé faut attendre faut attendre laisser sortir les gens d'abord sinon ça va causer beaucoup de tension et de d'énervement donc si vous quand vous entrez vous pouvez vous asseoir et si vous trouvez pas de de siège vous pouvez rester debout et si vous vous asseyez il faut vous lever si ya quelqu'un qui est enceinte ou une vieille personne et cetera et c'est très important et il faut espérer que une fois que vous êtes arrivé à la destination vous pouvez vous aaaaaah.*

**Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim4: Yes, I think it went a bit better than I was fearing! I'd never really done it before. Language-wise, the things I expected to be easiest were easiest; I was mostly able to keep up. I wasn't thrown off by the maths; it was actually all right because you don't actually need to look at the screen. It's not a visual prop helping you; it's just a head talking.

AM: Do you think that this kind of activity would get easier with practice?

Sim4: Yes, definitely.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim4: I suppose you just kind of get into it and you don't have time to be apprehensive because you're doing quite a few things at the same time so the nerves passed.

## Sim 5

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim5: They're just there. I don't think about them; they're just there. I'm rusty so it takes me a few days of immersion to get back to my previous fluency but they're just knocking about in there somewhere.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim5: I think at French into English because I don't speak French often and I think the split attention thing I won't be good at because I like to really focus on one thing and get the details really right so I'm not good at multitasking. Basically, I think my brain will probably explode.

AM: Do you think there are any aspects that you might struggle with?

Sim5: Just getting the into French because I'm not in the French flow at the moment so I'll probably struggle with that.

AM: How are you feeling before you start the activity?

Sim5: Interested, I suppose, to see how it goes. A bit giddy! There's a little bit of dread because I know how badly it's going to go!

### [Simultaneous interpreting from French into English occurs]

*Hello. I know that by speaking here I'm speaking to young people and so I decided to speak on a subject which might interest them: Facebook. Eh I will talk about Facebook in a manner which is quite violent, I think, therefore you risk being di-disappointed because in the last few years Facebook has taken a very great importance. We have thought - and Facebook has declared itself to be - social media. Well, when we go on Facebook and we famil-familiarise ourselves with it it makes a very unattractive characteristic come out in my opinion. Facebook for me is a much more a medium of exhibitionism which hides itself under a mask of socialisation. What should the homo numericus do on this social network? He publishes his thoughts his most trivial thoughts his most insignificant ideas without worrying at all about the quality in the way that he is expressing himself or with the least intellectual quality. There is no stylistic eh exigence on Facebook. We don't write on Facebook; we communicate or at least that's what we think. Writing rests finally on a work of elaboration, we think. I'm under the impression that for the social network that is Facebook it's the opposite which happens: you have to say directly in a few words without elaborating what we think about the most stupid subjects. On Facebook I was going to say communication has killed writing and if we say that communication is killed writing we always also say that communication has killed communication. The law of Facebook for me is veritably is truly that it a lot more for two people it permits people to practise narcissism a lot more and exhibitionism. Narcissus was quite likeable because he liked himself so much that he went to the edge of a river to look at himself in the water and see his reflection in the water. When we see the portraits that people online post on Facebook we cannot help but be anxious. This new form of narcissism is much more a form of exhibitionism but as I'm short of time I will simply say to you that, like reality TV, which is in reality the worst in terms of what constitutes communication, Facebook is nothing but a face and a sad face. Thank you.*

### [Simultaneous interpreting from English into French occurs]

*Bonjour, je m'appelle Pierre Hughes. Je suis anglais et je vais vous parler de l'étiquette sur le métro à Londres et je commence à vous parler maintenant. J'imagine bien que beaucoup d'entre vous ont visité Londres dans les années euh précédentes pour visiter les sites touristiques que Londres offre comme le palais Buckingham, Big Ben, euh le pont de Londres. Il y a beaucoup de choses à voir et à faire à Londres. Par contre, la question c'est qu-comment allez-vous visiter*

*ces endroits? Londres est une ville très très chère alors les taxis c'est hors de question et le cyclisme n'est pas vraiment une option très euh sauve euh alors beaucoup de personnes prennent le métro. Les anglais sont fameux pour leur politesse un peu excentrique et leurs interactions sociales à peu étranges et ça se voit clairement sur le métro parce que la manière dans laquelle ils naviguent le système est très très important. Ce qu'il faut faire c'est se souvenir des pas prochains. Quand vous arrivez à la gare ayez votre ticket prêt pour à la barrière parce que les gens vont passer à côté de vous très très vite alors vous ne voulez pas euh pre-vendre prévenir les gens de passer dans la barrière et vérifier que vous allez dans la bonne direction en regardant les placards qui vous disent euh où sont les lignes par exemple la ligne centrale la ligne bleue pour euh la ligne Piccadilly, la ligne bleu clair pour la ligne euh Victoria. Il faut savoir en quelle direction vous allez. Après après ça, vous allez aller à l'escalateur et c'est important. Vous allez entendre l'annonce-l'annonciateur dire que vous devez vous mettre à gauche ou à droite et si vous ne faites pas ça vous êtes euh vous serez très impopulaire. Quand vous arrivez au sur le plate-forme il faut avancer le long du plate-forme, ne pas rester à l'entrée parce que sinon ça c'est très difficile, les gens peuvent pas passer. Alors, si vous avancez sur la plate-forme ce sera plus facile pour les gens de circuler. Quand le train arrive à la gare, c'est important de se mettre un peu un peu en en arrière pour laisser les les personnes descendre du train parce que sinon ça peut causer beaucoup de tension entre les passagers. Quand vous entrez sur le métro, si vous trouvez un siège vous pouvez vous asseoir et sinon il faut avancer dans le le eh eh pour laisser entrer les autres personnes. Si vous avez un siège prioritaire, il faut que vous donniez cette ce siège à quelqu'un qui en a besoin, par exemple une personne euh enceinte, une personne ancienne et ça c'est une euh re-régulation très importante qui est implémentée sur le métro en Angleterre et on espère que vous arriverez à votre destination sans stress. Voilà, merci.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim5: I found writing the numbers less difficult than I thought. It was still difficult, though. There were still moments when I was panicking but kept going. I found it easier working into English definitely.

AM: Do you think that this kind of activity would get easier with practice?

Sim5: Yes because I'm not in the French zone at the moment. I think if I were in France for a week or something that would make it a lot easier and if I were doing it all the time it would be easier. I think it would always be stressful because you're in the moment and I'm the type who likes to go away and think about things so this is the opposite to my comfort zone.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim5: I kind of enjoyed it! It was kind of fun because I like getting things right so it was nice that when I got things right but then I couldn't remember the word for 'carriage' and I was annoyed but I kept going. I enjoyed it, actually, because I wasn't as completely horrible as I thought I might be at it. I thought I was going to be really horrendous and embarrassingly bad!

## Sim 6

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim6: I think I'll be most comfortable into English, without the maths. I've always been more comfortable if I have to translate something into English. It's the language I grew up with and went to school in so, while I've lived in France for a few years and I've always spoken French, I would think I would be better at working into English.

AM: Do you think there are any aspects that you might struggle with?

Sim6: If there are technical words, even if I know them in each language I can't think of the translation automatically. It's like I've got English in one store and French and the other. There are some things I would have covered more in French and I know the French technical words better than the English and vice versa.

AM: How are you feeling before you start the activity?

Sim6: I feel fine. I'm a little bit curious to see how it goes.

#### [Simultaneous interpreting from French into English occurs]

*Hello. I know that by ta- speaking today I'm addressing myself to young people and and so I've decided to speak about a a subject that might eh interest some of them: Facebook. I will talk about Facebook in a ma- in a in a violent manner so you might be eh sad. F- Facebook has taken an extraordinary importance. We ha- have considered - and Facebook has auto-proclaimed itself - as a media of socialisation but when we go on Facebook and we get familiar with it and when we go onto Facebook eh a much more sinister character comes out from it. Facebook for me is is much more a media of exhibition but that hides itself under a mask of socialisation. What does l'homo numericus do on this social network? He publishes his thoughts; the most trivial thoughts; the most insignificant wi-without worrying about the way he ex- expresses himself or any intellectual quality. The st- stylistic writing is completely absent from Facebook: we do not write; we communicate. Writing depends in the end on a process of elaboration. We think and we go onto Facebook is the opposite. We have to say directly in a few words, without elaborating, what we think about the most bi- un- bizarre subjects on Facebook. On Facebook on Facebook the communication has killed writing and if we say this that we also say that communication has killed communication. The law of Facebook for me is really that it allows people to pra- to be narcissistic and exhibitionism. Narciss was quite sympathetic because he loved himself so much he went to the edge of a ri- ri- river and looked at his reflection in the in the water. When we s- see the image in people give of themselves on Facebook we can only be worried. This form of narcissism is much more a form of exhibitionism but as I'm time-limited.. but, like reality TV, which is, in reality, the bottom feeder of communication, Facebook isn't just an image and a sad image.*

#### [Simultaneous interpreting from English into French occurs]

*Bonjour, je m'appelle Peter Hughes. Je suis britannique. Aujourd'hui je vais vous parler de l'étiquette sur le Tube à Londres. Je vais commencer mon discours maintenant. J'imagine que beaucoup d'entre vous avez visité avez à visiter Londres pour visiter toutes les sites touristiques comme Buckingham Palace, le Big Ben.. le London Bridge. Il y a plein de choses à voir à Londres, mais la question devient comment aller à ces endroits? Londres coûte très cher donc les taxis sont hors de question et faire du vélo n'est n'est pas une une méthode comme vue comme euh sécuritaire donc beaucoup de gens prennent le le Tube ou le métro. Bon, les Londoniens peuvent être connus pour leur politesse et leurs interactions sociales et comment naviguer le système est très important donc ce que ce qu'il faut faire c'est se prendre ces étapes suivantes: avoir so- son billet pour passer les barrières parce que les gens vont essayer de vous doubler et ne me ne pas retarder la queue derrière vous. Et et une fois passé la barrière il faut aller dans la bonne*

*direction.. quelle ligne prendre la ligne rouge centrale la ligne bleue foncé pour Piccadilly ou le bleu clair pour Victoria. Il faut savoir dans quelle couleur vous voulez prendre et dans quelle direction. Après, il faut.. on arrive à l'escalateur et ça c'est très important. Il faut se il faut rester à droite ou marcher à gauche. Dès qu'on arrive sur la plate-forme il faut descendre le plate-forme pour ne pas euh bloquer l'- l'entrée sur la plate-forme donc si on descend un peu la plate-forme on va trouver une emplacement plus facile pour monter dans le Tube. Dès que le train arrive dans l'- dans l'arrêt il faut laisser descendre les gens avant de monter dessus parce que cela peut créer beaucoup de frustration et de tension entre les les passagers. Une fois en sur le Tube et il faut.. on peut se mettre debout ou s'asseoir et si on est debout il faut descendre le Tube. Siii vous vous asseyez sur un emplacement prioritaire à côté de la porte il faut il faut laisser sa place à toute personne qui ont besoin: une personne âgée, femme enceinte, etc. Cela c'est un aspect très important de tr- de voyager sur le Tube. Avec un peu de chance vous allez arriver à votre destination sans problèmes.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim6: Yes, more or less. I found that into English was considerably easier for me than into French. I don't know if that's solely because I more comfortable that way or if I just struggled with the into French. I was living in France and I only just got back in March so I think if the topic had been Economics I might have been just as comfortable into French because I studied Economics in French but in most things I think I would be more comfortable into English.

AM: Do you think that this kind of activity would get easier with practice?

Sim6: I would hope so. I would imagine so; like most things!

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim6: The only thing I noticed was that when I did the numbers on the into French I found that I was more distracted. I was unable to keep going in the same way as I had been able to do into English. I don't know if taking away three is simpler than adding six or or of I was just able to click into the language more easily into English. I don't think that one or other of the speeches was easier. I thought the French one into English was going pretty well and the English one I was struggling with the into French, with certain translations a bit more than the into English. The second time around there were words I didn't quite know the first time and I had a second chance. Like 'quirky': I just decided to leave it.

## Sim 7

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim7: They're together: if I see something, I see the word in whatever language it is. If I see a pen it's not really a different thing: it's just a 'pen' or a 'stylo'. I don't really get different things for them. Even a car: depending where I am and who I'm with then that's when I choose the word in whichever language but they appear to me all in one space. If I were to look at a car, the instant thought that would go through my head would be the word in the different languages and then depending on who I am with - be it a German friend or French person in the family or English-speaking friends - however many different words for that car would appear and I would just pick the one that is right for the situation.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim7: I think continuing once I get thrown off by one word because for the next few parts of the sentence my mind kind of goes blank and then I have to get back into what are saying.

AM: Do you think there are any aspects that you might struggle with?

Sim7: I think the maths might be a distraction actually because maths would be my enemy! I'm not sure whether it will be easier working into English to French. I'm going to say into French, perhaps. I can get the vocabulary from English and, even if it does mean turning into a simple word in French, it will still be easier, whereas with complicated word French, finding it in English will be more difficult.

AM: How are you feeling before you start the activity?

Sim7: I feel relaxed enough and I'll be trying to remain relaxed!

### [Simultaneous interpreting from French into English occurs]

*Hi. I know that taking the word I address the young the youth and I am deciding to speak of a subject that interest them perhaps: Facebook. I will talk of Facebook in a way violent enough I think so you risk being upset because the last few years Facebook took an important an importance. We considered Facebook itself is self-proclaimed media socialisation. When we go on Facebook and we familial-arise ourselves with it we must take out of it a reducing characteristic. Facebook for me is very much a media of exhibition, which hides itself under the mask of socialisation. What does a homo numericus do on this social network? It publishes its thoughts the most trivial. The ideas that are most significant without worries of the smallest quality of the way no no intellectual qualities but [sighs] we do not write on Facebook; we communicate. That is at least what we think. The writing rests finally on a work of, we think, and I have the impression that, for the social network. Facebook it's the opposite: you have to say directly in a few words without elaborating what we think about the most important subjects. On Facebook I was going to say that communication killed writing and if we say that communication killed writing we have to also say that communication killed the communication. The law of Facebook for me is veritably that it allows many more people to practise the narcissism and exhibitionism. Narcissism is more sympathetic because they like themselves much more and he goes to the side of a river to look at himself in the water and see himself in the water. When we see the portrait that the something put on Facebook we cannot we are uh worried. This new form of narcissism is more form of exhibitionism but how the time is not here I will just say that, like TV reality reality TV that concerns communication, Facebook, unfortunately, is only a face and a sad face. Thank you.*

### [Simultaneous interpreting from English into French occurs]

*Bonjour, je m'appelle Peter Hughes. Je suis anglais. Aujourd'hui je vais vous parler du le train en Angleterre. Je peux imaginer que plein de vous avez visité Londres.. le Big Ben, le pont de Londres. Y a aussi des trucs pour voir et à faire en Londres. Le le question c'est comment tu vas. C'est très connu pour être cher euh les taxis on utilise pas et faire du vélo ce n'est pas vraiment vu comme euh une méthode sauf de.. donc on utilise le métro. Ils sont connus pour leur politesse. Ça peut vraiment être euh vu comme sur le train et comment on navigue le système c'est très important. Ce qu'il faut faire c'est de rappeler de ces ces steps: il faut avoir le ticket près une fois que tu arrives à la barrière parce que les gens ils.. une fois que tu passes la barrière il faut voir que tu vas dans la bonne direction pour avoir la bonne ligne: le la ligne centrale, la ligne de Piccadilly ou la ligne bleue et il faut savoir quelle couleur tu prends et dans quelle direction et puis tu vas arriver à l'escalateur. Ça c'est très important. Il faut te mettre à droite et [Unintelligible. Sighs] Une fois que tu arrives à la plate-forme il faut bien voir que on marche en dessous la plate-forme. Beaucoup de stress pour tout le monde donc si tu marches en dessous de la plate-forme ça sera plus facile de monter dans le train. Une fois que le train arrive dans la station il faut laisser les autres sortir du train avant que tu montes. Ça c'est très important. Ça peut faire beaucoup de tension et frustration entre les gens. Une fois que tu es dans le train il faut que tu asseoir si tu peux trouver un siège et si tu ne trouves pas de siège il faut te mettre euh dans le wagon au lieu de devant la porte. La siège... donne ton siège si tu vois une personne que tu penses que tu.. a besoin comme des vieilles ou enceintes. Passe une régulation qui est implémenté quand tu vas avec le train et oh shit.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim7: I didn't find it easier working into French. To a certain extent I did but, once again, once I hit a word in French that I couldn't get instantly then it just messed my flow. I struggled with the maths. I was trying to get the maths while trying to understand. I just kept saying: 'Oh, what is it? What is it? What is it?' but since I was trying to focus on the maths I couldn't find the word. I would say I'm better in English because I do most of my work in English in school and the French I would have would be familial French. I do do French in school but once again it's so different to when you do actually go to France.

AM: Do you think that this kind of activity would get easier with practice?

Sim7: Yes, definitely. It's possible, if you did it a few times, to get into a good flow; a flow of consciousness. You'd hear it and you'd get used to hearing yourself and hearing it at the same time.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim7: It wasn't exactly stress but I felt sometimes when I couldn't get the maths because I knew I was focusing on the interpreting but I still needed to get some brainpower into the maths that I wasn't stressed... a little bit under pressure.

## Sim 8

### Pre-interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim8: My mother is French and my father is Irish and they only spoke French to me for the first two or three years. I pretty much learned English through television and them putting me in a creche when I was two. I work as a tour guide in both English and French so, although I had to learn a script, I would be very used to conversing on the topic that I speak about in work in French. I'm perfectly comfortable with all topics in English. I would tend to use English a lot more, with French being used maybe 20% of the day. Comprehension-wise in French, I would be really comfortable. I would know exactly what someone is saying but when it comes to actually saying it myself I would struggle a little bit more. It would take me a little bit more reflection time, whereas in English it would be a lot easier. The main thing with French is reading. Because I never had to read, my English ability in reading far exceeds my ability in French. As for the way my languages are stored, I think it depends on who I'm with because when I'm in France I find that my thoughts do become more French; I would start thinking in French, whereas in Ireland I think constantly in English. Something that was pointed out to me that I never realised was that, from a young age when I speak to my mum, half the sentence will be in French and the other half will be in English, not necessarily consecutively but every third word or fourth word would be in one language and then I would switch back. So, how I access my languages depends on who I'm with at the time. I feel like I have two separate stores for my languages. If I'm speaking French, I'm not pushing the English side to get the word. It's just completely natural.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim8: Usually I'm quite happy with concentrating. Once I set my mind to concentrating on something it comes quite easily. In terms of the maths part of things, that's going to be interesting because I don't know if I'm used to concentrating on doing two things at once. For example, in college you might be concentrating but you're writing down exactly what you hear and you're already filtering through to buzzwords so there's not a whole lot of interpreting that you have to do yourself. From what I've just done, funnily enough, I definitely felt more comfortable into French, which I wasn't expecting. I think it's because I'm so used to finding alternative words in the language that I'm weakest at it's easier for me to find a new word, whereas in English and trying to find the exact one because I'm so used to having the right words. That was a really interesting discovery, actually.

AM: Do you think there are any aspects that you might struggle with?

Sim8: Concentrating on two things at once, I think. I don't think that's something that will come very naturally to me.

AM: How are you feeling before you start the activity?

Sim8: I'm worried about the French to English. I'm not stressed, though.

### [Simultaneous interpreting from French into English occurs]

*Hello. I know that in speaking I am addressing myself to young people and so I've decided to discuss a subject that most likely interests them: Facebook. I will speak of Facebook in quite a violent manner so you may be disappointed. For the last few years Facebook has taken on a huge importance. We have found that Facebook is a self-proclaimed me- media of social- for socialisation and so when we come on go onto Facebook and we become more familiar with it it brings out a characteristic in people ehm less flattering. For me, Facebook is a media side of the media that is difficult, that hides under a mask of socialisation. For example, homo numericus on this social media. They post the most trivial things. The most insignificant ideas can be put in*



*the strangest way of expressing these and there are no intellectual properties. The i- stylistic ideas are completely absent from Facebook. We don't write on Facebook: we communicate, or that's what we think. The writing is on our style of how we elaborate or how we think but on Facebook it's the opposite that is true: we say directly in a few sentences, ho- without elaborating, what we think on some very difficult subjects. On Facebook communication has killed the art of writing and if we say that communication straight communication has killed communication. The law of Facebook, in my opinion, is that it really permits or lets people do a lot more practising of their narcissism and exhibitionist. The narcissist allows this much better because he likes this he used to go to the river and see his portrait in the river but now he has allowed that these portraits are on Facebook. We can only be worried of how this new form of narcissism has become a form of narciss- exhibitionism. And I'd like to remark that this communication has become a problem on Facebook of sad proportions.*

### **[Simultaneous interpreting from English into French occurs]**

*Bonjour, je m'appelle Peter Hughes, je suis anglais et aujourd'hui je vais discuter ce qui se passe avec le métro à Londres. J'imagine que il y a beaucoup qui ont visité Londres en quelques années pour voir les centres touristiques qui sont à Londres, par exemple Buckingham Palace, Big Ben, London Bridge et y a beaucoup de choses à voir à Londres, mais la question est comment est-ce que on y arrive? On sait que Londres est aussi est beaucoup trop cher. Par exemple, les taxis on ne peut pas prends vraiment les prendre et les vélos sont difficiles à prendre euh car il y a pas beaucoup de sauveté. Euh les anglais sont connus pour être coquines et polis et pour leur communication sociale en trop et la façon dont ils arrivent à voyager en métro est très importante. Alors, pour le métro, vous allez faire le ce qui se le la prochaine chose: il va falloir avoir votre ticket prêt quand vous arrivez aux barrières parce que tu ne veux pas attendre que les gens derrière toi attendent. Il va falloir passer dans la bonne file pour aller dans la bonne direction pour savoir où vous y allez pour savoir quelle ligne vous allez prendre la bleue pour Piccadilly, la verte pour Victoria et il va falloir quelle ligne y aller et dans quelle direction. Vous allez arriver à l'ascenseur et c'est très important parce qu'on arrivant vous allez marcher à droite et redescendre à gauche. Si vous desc- si vous changez ceci ce serait pas populaire et au plateforme en arrivant vous allez descendre à droite et beaucoup de gens restent à l'entrée, ce qui va stresser beaucoup de gens autour de vous. Alors, pour descendre le plateforme vous vous marchez à gauche et c'est plus facile pour aller au métro à droite. Quand le métro arrive à la station il va falloir reculer pour laisser ceux qui sortent. Autrement, ça va causer beaucoup de frustration et de tension entre les gens. Une fois que vous êtes sur le métro vous pouvez s'asseoir vous vous asseoir si vous avez la place ou si vous vous asseyez pas il va falloir passer par la porte et continuer pour pas causer de problèmes à la porte. S'il y a quelqu'un qui monte en métro qui a besoin d'un siège, par exemple, quelqu'un enceinte, les vieux ou les handicapés, il va falloir se lever pour les laisser la place. C'est très important en métro. En arrivant, vous allez arriver au métro sans problèmes et continuer votre voyage.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim8: It was the opposite: the French was much more difficult to get into. I think just concentrating on the two was more difficult. It was much more difficult working into French. I needed to really concentrate on that one to find the right words. I think the direct translation was okay into French but once I had to do the numbers it became really difficult.

AM: Do you think that this kind of activity would get easier with practice?

Sim8: Yes, definitely. I could feel myself getting into the zone and then when I noticed I was in the zone I came back out! I'd say if you're used to how it feels once you're actually in the zone then it would definitely get easier.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim8: I think when I missed a sentence I tended to miss the next one as well because I was thinking about the previous one. I think I did a lot of trailing off and not finishing sentences. That could just be my perception!

## Sim 9

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim9: The mum is Spanish and she would always have spoken to us in Spanish and we would always answer in English! We never really speak Spanish unless we have to or we have an exam on the Monday and it's Saturday night and we realise that we need to practise! We go to Spain a fair bit. I never lived in Spain but you could argue that I kind of did: I would spend a couple of months there over the summer but we never had a house there or went to school there. In terms of how my languages are stored, when I speak Irish (which I'm really bad at) and Spanish would come out I would actually feel it physically in my head. With Spanish and English I don't have that problem. I understand Spanish really easily but I don't really feel it anywhere physically in my head. I feel like English and Spanish are in the same stores: when I speak one it's not like the other one is turned off. I feel like they are intertwined.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim9: Working into English, definitely! I have way more practice speaking English and I usually just listen to Spanish. I was always quite.. not embarrassed but because obviously when you're speaking Spanish to Spanish people you're a little bit more conscious. My sister doesn't really care if she says something wrong, whereas I would be the opposite. I don't want to say anything wrong! I feel like English is definitely my dominant language because I'm living and working and studying in English.

AM: Do you think there are any aspects that you might struggle with?

Sim9: Unfamiliar words. I don't really know what's going to happen with the maths; I'm not really thinking about it yet.

AM: How are you feeling before you start the activity?

Sim9: I feel fine. A few nerves but that's okay.

#### [Simultaneous interpreting from Spanish into English occurs]

*Good morning. I'm gonna talk to you about an activity that has converted into.. that's been popular in some few cities. I'm referring to in what in my youth was to do jogging, colloquially ju- just running. I'll start now. In the streets of the cities you probably have observed that there has been a new a new fashion about jogging. Not running because you- you're late or in a hurry. In my youth it was just jogging but now it has but now has just been referred to as running. I'm referring to people who who run for pleasure not run for the sport. Many times I've asked myself why has this become so.. I've talked about it with a lot of people and I'm gonna repeat what they say. A lot of people do it for flexibility. A lot of people say that it's an activity that you can do whenever you like. It's easy it's easy if you professional life if you're working if you've you're busy working with a family you can go running wh- where you want and when you want. On top of that, it's cheap: all you need is a pair of runners but for use of you you have but you can spend a small fortune on runners, iPods, T-shirts: whatever you want and finally I will tell you that you can do two things: you can run ou- outside where you want, when you want or you can sign up to an athletic club; a club where a professional can show you how to run and to improve your results. Good. I don't know if I've convinced you but I'll give you the advice to try it because everybody says that they've tried it; you get hooked. It's easy to get addicted to. I hope you get converted. Good luck.*

#### [Simultaneous interpreting from English into Spanish occurs]

*Hola, eh soy de Inglaterra. Hoy voy a hablar contigo sobre el etiquit de del metro. Eh creo que mucha gente que hay visitado a Londres eh y has visitado como a Buckingham Palace, London*

*Bridge. Hay muchas cosas para hacer en Londres pero el quest-i3n es es como ir all3. Es una ciudad muy muy caro y andar es muy dif3cil y ir en bici es no es muy ehm es muy dif3cil. Mucha gente coge el metro. Eh los de Ing- de Inglaterra son muy f- amistosas, muy simp3ticas. Solo que tienes que hacer cuando llegas al a la estaci3n tener tu billete tener tu billete ehm y cuando has entrado a la cantera de billeta eh cualquier l3nea quieres quieres ir la l3nea de Picadilly la l3nea de Victoria tienes que saber qu3 l3nea es y qu3 color es la l3nea. Es importante ir a la escalor. Es importante saber ir a la izquierda o a la derecha. Eh no vas a ser muy popular si vas a a al izquierda si quieres ir a la derecha. No quieres estar con [sighs] si andas... [sighs] Una vez que el tren viene o llega a la estaci3n, esperar que la gente sale del tren porque si no si- crea mucha tensi3n entre gente. Eh puedes sentarte si hay sillas. No mm si quieres sentarte en una una silla de prioridad pero tienes que que darlo a un a una persona que est3 embarazada o alguien que sea que sea m3s mayor que t3 que digo. Gracias.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim9: I think that the Spanish meant that I found the maths involved adding so much harder; I don't know. I think that the pressure of knowing that this was the official interpreting activity had an effect on me but I knew I wasn't going to be as good anyway into Spanish. I think I was just as bad as I thought I was going to be.

AM: Do you think that this kind of activity would get easier with practice?

Sim9: Yes. Definitely! Definitely!

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim9: The stress did not ease; it got worse! I think it came from the fact that you know a word and you know you have it; you know you know what it means but you can't quite find it. Then you have to try to keep up but it's gone. I think practice would make it a little easier because you would find yourself using the same words more often.

**Sim10**

**Pre- interpreting Think-Aloud Protocol**

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim10: My mother is Spanish so I've grown up speaking Spanish. I spoke Spanish first but by the time I was in pre-school English became the common language at home. Until I was about 12 I hated Spanish. The classic thing! Then I realised that actually it was very useful. I did Leaving Cert Spanish but it was from beginner level so I didn't go to class; I just sat the exam. I minored in Spanish in European Studies here for my degree so I did the first two years with Spanish and Russian at the same level and then in the final year I majored in Spanish. I worked in Madrid for two years after I graduated. I've done a good bit of written translation and very basic interpreting in meetings. In addition to those two years, I've been back and forth to Spain quite often with my family. I feel that English is more dominant. I'm very very comfortable speaking Spanish. There might be the odd grammar error that comes through. If we were having this conversation when I was living in Madrid the languages would have been virtually equal. I've been back here four years now so you naturally lose a little bit of it. As for how my languages are stored, I feel like I have separate stores; different chips. There would be some elements that overlap, particularly because I have a good few friends in Madrid who spoke Spanglish: they grew up in bilingual families in Spain or South America so, as a result of that, I've ended up with more mixed set-up my mind, whereas before I wouldn't have mixed languages at all. They do, however, operate in slightly different blocks.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim10: I will definitely be better going from Spanish into English, I think, just because it's a more natural switch. My mental maths is not great, despite the fact that I work with numbers! I'm used to having spreadsheets so that'll be interesting. I think it should be fairly okay.

AM: Do you think there are any aspects that you might struggle with?

Sim10: I did find that the English into Spanish in the practice was easier than the Spanish and English so I suspect it will probably be the same again.

AM: How are you feeling before you start the activity?

Sim10: I feel grand. I don't like making mistakes so I could already feel myself in the second one thinking 'Oh no, that's wrong!' so presumably that will come through as well. I'm a bit of a perfectionist.

**[Simultaneous interpreting from Spanish into English occurs]**

*So, today I'm gonna speak to you about the I'm gonna speak to about a very about a very pop- a very newly popular activity in various cities. I'm referring to what in my youth was referred to as a uhm hacer footing, which is the Spanish for to do the jogging. Therefore, I will begin my speech now. Ehm when one looks around th- the cities you will have begun to observe a phenomenon that that you can see over the the ehm you'll see people who are running, not just running because the going somewhere because they're in a rush but because they're doing what in my youth was referred to as ehm doing the jogging. Uhm it's now begun to be referred more frequently a- to as running or corriendo. Eh this is referring to people specifically who run for pleasure or for sports. I have often asked myself why this has had such a great success. I've spoken to many people and I'm going to lay out some of the reasons that those people that I've asked gi- gi- give on on frequently. First of all, it's a very flexible sport. Everyone tells me that it's an a sp- it's an activity you can do at any point any time and it's very easy to combine with a professional lifestyle or with family life as well. One goes out to run when they wish when they can. And of course it's a very cheap sport: really all you need is your runners but of course the deeper you go into the into the into the subject you'll realise you can very quickly spend a small*

*fo- a small fortune buying t-shirts, shoes, iPods, anything you like. And finally I can tell you that you can do two things: or you can go and run freely, wherever you like and when you like, or you can join an athletics club; a club where a professional will teach you how to run and how to improve your times. As you can see, I'm not sure if ehm I've convinced you but I would advise you to give it a shot as anyone who I've spoken to who has tried it has told me that it's an addictive sport. And finally let me say it hav- no one can say I haven't warned them or advised them.*

**[Simultaneous interpreting from English into Spanish occurs]**

*Hola, me llamo Peter Hughes. Soy británico y hoy le voy a hablar de la etiqueta de de de la manera de comportarse en el Tube, que es el el metro. Me imagino que muchos de ustedes ya han visitado a Londres en los últimos años para visitar lo varios sitios turísticos que Londres tie- ofrece, tales como el Palacio de Bu- Buckingham, Big Ben, el Puente de Londres pero la pregunta es cómo se llega a estos sitios? Londres también se conoce como una ciudad muy cara. Por lo tanto, los taxis so- ehm no es- están en cuenta; las bicis no sé se ven con una manera muy segura de viajar entonces mucha gente toma el Tube, que es el metro. Los los británicos son conocidos para sus actitudes algo excéntricos en las situaciones sociales. Por lo tanto, la la manera de comportarse es muy importante. Entonces, una vez que llegan a la estación de metro es importante tener la el billete eh listo para entrar y pasar por las ehm las barreras para no para no causar que empiecen a correr detrás de usted y también es importante averiguar antes saber en qué dirección quiere ir y asegurar que sabe en qué línea quiere viajar: tal el el el azul de Vitoria, el rojo del central o azul oscuro de Picadilly. Es importante saber en qué dirección y en que punto. Entonces, llegaran a la escaladora. Lo importante es quedarse en el lado derecho y no la izquierda si no se enojera la gente... algo que le hará mu- un poco impopular. También es importante bajar el andén y no no acumularse cerca de la entrada, algo que causa estrés para mucha gente y bloqua la entrada. Si usted baja el andén eh será más cómodo y será más fácil subirse al tren. Una vez que llegua el tren es muy importante acordarse de esperar a un lado para dejar salir la gente que ya está ya está en el tren y una tal vez una no una vez su ehm hay entrando en el en el metro es posible encontrar un sitio donde sentarse pero lo mejor sería bajar la por la por el coche y no bloquear la puerta. En el caso de que ustedes tengan una sedia de propiedad es importante estar listo para darse ofrecérselo a una persona que le puede hacer falta más: una mujer embarazada o una persona mejor y es una una regulación muy importante del del metro. Con un poco de suerte llegara a su estación sin ningún problema a su designación sin ningún problema y con un viaje seguro.*

**Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim10: I found it easier working into Spanish but that was probably thanks to the experience of the warm-up and the pacing in the Spanish report, which was a bit faster than this would have been and also I'm used to Castilian Spanish than Latin American Spanish. I think the warm-up and also the fact that you do this video twice really helped. You kind of get into a rhythm with it. It was really interesting because I've never done simultaneous before. It was a really interesting experience in that sense.

AM: Do you think that this kind of activity would get easier with practice?

Sim10: Definitely! You get into flow.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim10: No, I wasn't stressed that all. The maths in the into Spanish probably stressed me out the most and I was probably more stressed in general during that first Spanish piece because I was getting flustered and I was like 'Ah, I'm not saying the right words!' or not keeping up with the pace enough but generally I feel like I remained very calm. Whether the heart monitor tells the same story is a different question!

## Sim11

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim11: Well, my mother is Spanish and my dad is Canadian. I was born in Spain and lived there for the first four years of my life. Then, my parents moved to Ireland so I learned English from my mum and growing up in Spain. I didn't actually start speaking English until little bit later; I started speaking both of them perfectly around the age of three. I've spent the majority of my life living in Ireland so obviously I speak more English than I do Spanish. At home, I speak Spanish to my mother and English to my father and we speak Spanish when we are together to make up for the fact that we are in Ireland. I feel like my languages can be at different levels, depending on external factors, such as what country I'm in. I did my Transition Year in Madrid and that made me realise that it doesn't have as much to do with my level: it has more to do with where I am. If I'm in an environment where English is spoken that's the language that comes into my head first. If there are more Spanish speakers around me then I start thinking in Spanish, in the same way I would think in English here. It depends where I am. My languages are like a mix in my head. I've been asked this a lot, actually. The language I think in is just the one that comes to me first. Again, the place I'm in really affects the language I think in. If something happens, like you drop something and you instantly react by swearing or something, that always comes out in Spanish for me. My initial reaction is in Spanish and I don't have to think about it but then when I'm thinking things through it's mostly English. There's no way it's stored in my mind; they're just there. I talk to myself a lot as well in both languages. Sometimes it can be a mixture of both languages but they're kind of just both there.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim11: I couldn't tell you! I'll tell you after this! I'm not sure what to expect. In the warm-up I was stronger in the English one, translating into Spanish, but that's because I'm not very used to South American accents and her accent was very different to our Spain Spanish accent. For me, that was a little bit difficult.

AM: Do you think there are any aspects that you might struggle with?

Sim11: Perhaps the same thing again. I honestly don't know! We'll have to wait and see!

AM: How are you feeling before you start the activity?

Sim11: Interested! I don't know what's going to happen. I'm a little bit anxious but I'm not feeling terribly anxious. I'm also little bit apprehensive, but not too much.

### [Simultaneous interpreting from Spanish into English occurs]

*Good morning. I'm gonna talk to you about an activity that has become a very popular activity. I'm talking about what, in my youth, we called running or jogging, ehm, which is basically just running. I'm gonna talk about it now. As soon as you notice what's happening around you you can see a phenomenon that's happening everywhere. I'm talking about people running and I'm not talking about people running like they need to go from one place to another because they're rushed. They're doing because they're doing what, in my youth, they called eh they called running and now now it's been dominated by the word running. I'm talking about people that run for fun, that are running for sport. A a lot of times I ask myself why this eh great exit eh not exit eh.. I'm gonna talk about.. a lot of the reasons why a lot of people ask themselves why running is so popular. It's popular because it's flexible. A lot of people tell you that it's an activity that anybody can do in any moment and it's compatible with a professional lifestyle or with a family lifestyle. One person can go running whenever they can, wherever they can and it's a cheap support. All you need are is runners and you realise that you don't really have to spend that much money eh paying for shoes or clothes or iPods. And finally I wanna tell you that you can do two things:*

*you can either run whenever you want, really or, of course, you can alternatively become a member of a sports club where you can run. Well, I don't know if I've convinced you but I advise you to try it 'cause people that have tried it say that it's a it's an addictive activity.. eh eh it becomes addictive. Eh don't tell me that I didn't warn you. Eh good luck.*

**[Simultaneous interpreting from English into Spanish occurs]**

*Hola, mi nombre es ... y soy británico. Hoy voy a hablar contigo sobre la eh la manera en que debes actuar en el metro. Muchos de vosotros habéis visitado Londres en los últimos años probablemente para visitar centros turísticos. Eh hay muchas cosas que podéis ver en Londres pero la pregunta es cómo puedes acceder a estos sitios? Eh Londres es una ciudad muy cara así que no puedes coger un taxi e yendo en bicicleta tampoco es muy seguro así que mucha gente coge el metro. Ahora los británicos eh son conocidos como siendo un poco graciosos y y la manera en que vas en el metro es muy importante. Lo que tienes que hacer como miembro es cuando llegas allí ten tu billete en mano y para para que no haya cola detrás de ti y para ir para ir ehm para ir hacia la línea adecuada tienes que tienes que saber el color eh de la línea y la dirección en la que vas. Mucha mucha gente tiene que saber debe debe de saber en qué dirección tienes que andar porque en la izquierda es una manera y en la derecha otra y puede ser un puede ser bastante estresante si no lo haces bien. Una vez que llega el el metro eh asegúrate de que dejes que dejes la gente salir del metro antes de que entres. Eso es muy importante y una vez que estás en el metro siéntate si encuentras un asiento libre y si no estate de pie por detrás del metro. Eh si hay una mujer que está embarazada o alguien que no puede estar de pie déjale sentar en tu asiento si estás tú sentado. Y eh luego llegas al eh sitio que quieres ir y puedes disfrutar del resto de de tu viaje.*

**Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim11: I wasn't sure what to expect so it was definitely easier than I thought it would be. I wouldn't be able to tell you which language I found it easier working into. It's easy for me to listen to things in English and then say them in Spanish. Listening to Spanish - if it's the right accent - I can understand it but it's a little bit more difficult for me, whereas in English I can understand all accents from around the world. In Spanish I wouldn't be able to understand all South American accents, for example. So, it's definitely easier for me to understand English and then translate into Spanish, I think. Just after doing that I would say that that is true. Surprisingly, adding six always helps! Adding is easier than subtracting! It's true! It's much easier to visualise and then it doesn't interfere as much.

AM: Do you think that this kind of activity would get easier with practice?

Sim11: Definitely. I'm actually just thinking that after doing this I'm thinking of becoming an interpreter! It's a new career for me! No more Science for me; interpreting all the way!

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim11: I wasn't sure what to expect beforehand. I also thought that it was going to be written! I was excited to try and *get al.l* the points and information. I was not anxious while doing it at all. The only bit that I was a bit worried about was just not knowing what to expect but once you're in it and doing it it's fine. A bit like life!

Sim12

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim12: In my working career, most of my jobs have been in English. In Spain, I taught English. Here, I had two summer jobs and I've been working here for two years. I'm in contact with customers and I can express myself in a formal way in English without being too pompous. I'm much better in English because with Spanish you're either formal or you're informal and it's really hard to find a middle ground but English is very good in that sense. When it comes to work-related things, English is my dominant language, for sure, even if I studied my degree in Spanish. Then, when it comes to expressing ideas or really personal things in English, I tend to put too much shit in there but that's just because in English you do just put too much shit in there, using all of these 'like' and 'you know' and all that nonsense. In Spanish, we are a lot more passionate, I think! A lot more straight to the point. So, for formal communication or corporate or work-related things I feel like I'm really good in English and when it comes to personal things and deep conversations I feel more dominant in Spanish. Most of my life I have read in English so when it comes to reading I feel that because I lived in the US I feel like my vocabulary is lacking in Spanish. When it comes to poetry, in English it means nothing to me and in Spanish it does. I feel really bipolar! So, dominance, I wouldn't be able to tell you which language if my dominant language. There are exactly equal. Because I lived in the US in very important years of my life, it's had an effect. I have nine siblings and the older ones have incredible English. One of them is more Irish than she is Spanish. Then the younger ones have a much lower English level than the others. You can see how it affected the language of each person at different stages in their life. For me, those four years in the US are totally key for my *bilinguismo*.. bilingualism. There are some words that just sound like they should be said in Spanish and not in English! *Bilinguismo* is just so clear!

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim12: I don't think I'm going to be particularly good at anything! I thought to begin with that it would be easier to translate into English. Actually, I think it's going to be easier to translate into Spanish as I think the English speaker is going to be much slower. I think I'm going to be better translating into Spanish because of the speed of the language and I am going to be good at getting the message across, not necessarily translating the words one by one.

AM: Do you think there are any aspects that you might struggle with?

Sim12: Prepositions. I'm going to mix them in a really weird way, I think! Prepositions are very tricky in Spanish and English so I think that's going to be hard. Numbers are going to be very hard because I'm not concentrating on the numbers. I want to communicate the general message so specifics like numbers I think I'm going to miss.

AM: How are you feeling before you start the activity?

Sim12: I bit stressed, actually. I can totally see this heart rate thing being high! I am curious and I think the hard thing is going to be to concentrate, to care about what they're saying! There was a moment in the warm-up where she was talking about the migrants and my mind just went somewhere else. Concentration is going to be a big issue for me.

### [Simultaneous interpreting from Spanish into English occurs]

*Good morning. I'm going to talk about an activity that has become exec- extremely popular in many many cities. I am referring to what you we call jogging, basically running. I'm gonna start my di- ehm speech. If you look around you you will see that there is a new phenomenon going: people running and I'm not talking about people running because they are late to something or to a date, I'm talking about what we con- we considered jogging at one point. I'm referring to*



people that run.. jog because they find pleasure in it eh or because they one of the sports-y people [laughs]. I'm gonna go through some reasons why people think that it's such a big, popular thing to do. A lot of people will tell you that it's because the flexibility it gives you of the flexibility it gives you. It's totally compatible to a with a professional life, with fam- eh with family life. You start running when you when you can, when you want to. It's very cheap. That's another reason. You just need a pair of runners. Although, if you look into it you can really just go crazy on how much money you can spend on iPods, shirts well t-shirts. You would consider you can do two things: you can run whenever you want, independent, or you can actually join a club where a professional can actually walk you through it and help you do it. I don't know if I've convinced you about this but I really really suggest you you try it. Everybody or a lot of people have tried it say it really hooks you. And when it does don't tell me I didn't tell you it would.

### [Simultaneous interpreting from English into Spanish occurs]

*Hola. Soy inglés y hoy te voy a hablar de cómo debería uno comportarse en el metro de Londres y voy a empezar a hablar ahora. Para visitar a todos los sitios turísticos que puede ofretar Londres, como Picadilly Circus, Buckingham Palace uno tiene que moverse de un sitio a otro. Como moverse, siendo una ciudad tan cara? Ir en bici no es muy seguro pues mucha gente decide llevar el me- eh a irse ir en metro. Gente inglesa el la los ingleses son conocidos como gente muy edu- con mucha educación. Y por tanto es muy importante saber cómo cómo comportarse en el metro de Londres. Cuando tú llegas al metro tienes que tener el el ticket ya en la en la mano para hacerlo porque no quieres que la cola se relantice y en cuanto pases eh en cuanto pases el eh donde pones el ticket tienes que saber hacia qué lado tienes que ir: hacia Picadilly o Victoria. Tienes que elegir ya la línea por la que vas a ir y la dirección en la que vas a ir. Después llegas a las escaleras mecánicas. Te tiene si estas quieres ir a si vas a la derecha te tienes que quedar o sea es digamos la línea lenta y por la izquierda es si quieres ir rápido. Y en cuanto llegas al andén te tienes que poner del tú tienes que poner de lado para no molestar a la gente que pasa. Y antes de montarte en el en el tren bueno lo que se le llame la cosa esa tienes que dejar que la gente salga antes de entrar. Una vez que llegues te puedes sentar si encuentras un asiento y si no encuentras un sa- un asiento te quitas del medio de la puerta y deberías ceder tu asiento si consigues o no a cualquier persona que lo necesite más que tú: embarazadas, gente mayor y esto es totalmente necesario si vas a viajar por el metro. Y una vez que llegues todo bien has disfrutado de tu viaje.*

### Post-Interpreting Think-Aloud Protocol

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim12: I don't even know what to answer! I think that after I did the practice it was going to be easier into Spanish and it was. I think I've been good at communicating the general message but I've been very bad because I've given it my own swing, my own connotation! There weren't any numbers so that wasn't an issue. There was nothing very detailed so that was good. I think the maths is hard but I hate numbers! I didn't think I would be as fluid as I was so I think I delivered what I thought I would deliver.

AM: Do you think that this kind of activity would get easier with practice?

Sim12: If you have an interest in it, yes, because it it takes effort. It has to get better. Everything gets better with practice, I think. For me, I think I just couldn't be bothered interpreting properly! Interpreting is really not the same as translating! I think I'm better on paper. I don't translate in my head: I choose what I want and I navigate in whatever way I feel comfortable. I have never consciously made an effort to get better in a certain area in either language because I don't need to. When I hear Spanish I just automatically understand so I don't have to translate. I know that when people make mistakes I am conscious of it and when I make mistakes I'm conscious of it but mostly I just don't care! I've learned a bit of French but I was never really into it either. If it involves effort I don't want to do it. This feels like it takes a huge effort and I think 'poor people who have to learn another language because it's really hard!'

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim12: I think I was stressing beforehand because I knew I was going to have to concentrate and I didn't feel like concentrating! I didn't think it was going to involve as much effort as it

did, actually. Honestly, I didn't read any of the information you sent me! The stress peaked at points and then it went up and down.

## Sim13

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim13: I think that's a very difficult question to answer. To be honest, I don't know. I almost don't know how my brain is organised. When I'm in Spain with my sister, I would say that Spanish flows a lot more easily and it's a lot easier to access in general.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim13: I think I will be best from Spanish to English; I find that easier. I feel like my English is more dominant.

AM: Do you think there are any aspects that you might struggle with?

Sim13: The pace. If the pace becomes too fast I'll have to stop. For example, in the Spanish translation there was a long sentence and I was waiting for it to finish so that I knew the whole sense of it but then it went on too long and I couldn't go back, if you know what I mean? And also the maths. Maths has never been my strong point.

AM: How are you feeling before you start the activity?

Sim13: Slightly tired, to be frank. That and very happy!

### [Simultaneous interpreting from Spanish into English occurs]

*Good day. I'm gonna talk to you about an activity that that has been very popular now lately in very many cities. I'm referring to in in when I was young we referred to as jogging, colloquially as running. If- I will start now with my discussion my. If you look at the roads you will see a phenomenon that is all over the place. I refer to people who are running. I don't mean running because they arr- arrive late at a particular place or arerushing but they're doing when I was young we used to refer to as jogging and now it's more like the word running so I'm referring to people are running for pleasure or for sport. Many times I ask 'why has it been so successful'? I've spoken about it to many people and I'll note a few of the reasons that a lot of people repeat who practise this activity. Firstly, because of its flexibility, they all say that it's an activity that you can do at any moment and it's easily compatible with a professional life or with a family life. One can go out whenever they want and wherever they want. Also, it's a it's a sport that's cheap. You uh in theory, only you need are some runners but you can also spend a small fortune buying shirts, runners, iPods, everything that you might want. Finally, I would say that you can do two things: you can go out and run freely, when when you want and where you want, or you could sign up for an athletics club: a club where a professional can show you how to run and to improve your times. I'm not sure if I've convinced you but I recommend that you try it because a lot of people who tried it that it's an activity that's addictive. It's easily to become addicted to it. Don't say you haven't been warned.*

### [Simultaneous interpreting from English into Spanish occurs]

*Hola, me llamo Peter Hughes. Soy británico. Hoy le voy a hablar sobre etiqueta de la del metro en Londres y empiezo ahora. Yo me me imagino que mucha gen- muchos de vosotros ha visitado a Londres para visitar a los sitios de turistas, por ejemplo el Palacio de Buckingham, Big Ben, el Puente de Londres. Hay muchas cosas para hacer y ver en Londres. La pregunta es cómo se ir a estos sitios? Londres es un ciudad muy cara y taxi... pues los bicis no se ve como un una manera segura. Hay mucha gente que va en metro. El británicos s- s- son muy socia- sociables y si puede navegar la sistema con ellos. Es muy importante. Tenemos que acordarnos de estos.. cua- cua- cuando llegas a la estación tienes que tener el billete listo porque va a haber una cola atrás tuya y cuando vas tienes que acertar que vas en la dirección. Si subes en la la roja o en la azul, tienes que saber qué color de metro vas.. en qué dirección. Después, llegarás al ascensor*

*y tienes que poner de pie a la derecha. No te equivocas porque si no no vas no vas a ser muy popular. Tienes que andar abajo en la del andén. Puede causar estrés para la gente. Si si vas más para abajo del andén encuentras más espacio. Cuando el tren llega ponte para atrás para que la gente puede salir del tren porque es muy importante porque causa much- mucha frustración cuando estás dentro del metro puedes sentarte. Si no hay asiento anda más para abajo. No te apoyes si te sientas al lado de la puerta. Ve si alguien necesita el asiento, por ejemplo, una persona que está embarazada. Es un es una regla muy soc- muy social y llegas a tu destinación sin problemas y disfruta el viaje. Gracias.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim13: When you're doing two things at the same time there is almost a part of your brain that actually hurts. It's not possible to concentrate on two things without being discomfited. The experience matched my expectations. I understood the purpose of the maths and the translation and the distraction and all that. On a personal note, I work with interpreters quite regularly in court and they can be interpreting for four to five hours. I would love it if research were carried out on access to interpreting as a human right, which was what you were saying you wanted to research. Interpreters are not only helping in court; they step outside then help in the consultations with the lawyers so it doesn't stop. Worse still is when you hear the interpreter making mistakes. Interpreting is not something that's talked about; it's a practical thing that goes back to people's human rights. Now that I've had this experience, I would understand why interpreters are making mistakes: they're under pressure and they're under strain from interpreting for so many hours at once.

AM: Do you think that this kind of activity would get easier with practice?

Sim13: Yes.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim13: There was a bit of stress but you do just motor on. With the maths there was a bit of stress but this goes back to what I was saying earlier on: it's your brain trying to remember something and trying to do two things at the same time. That is, in my view, stressful. I continued to feel tired. When I felt like I was on the horse, so to speak, and doing well I felt it was grand and I could keep going and that was a good feeling.

## Sim14

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim14: My mum's Spanish and my dad is Irish. I grew up Ireland but I used to go to Spain for about three months every year from the age of 6 to 16. I don't really remember learning Spanish but there are voice recordings of me aged one and two speaking Spanish. When I was little mum tried to give us the odd Spanish class but we never had any interest in it. I would have spoken it a lot more under the age of 24 because I lived at home but as I don't live at home now I speak it maybe twice a week with my mum when I'm there. The way I speak Spanish would reflect the things people talk to their mum about so a lot of other topics, like political subjects, *lo puedo hablar y sé cómo hablar de cosas políticas pero* I've found that a lot of the *vocabulario* wouldn't be at the front of my head *pero esta aquí atras* and then once I start talking about it it comes up. It takes a day or two for the higher level words to come forward. I would speak to my mum in a kind of patois of *inglés-español hablamos un poco así. Luego, igual en inglés* and then I'd be saying 'will we go to *las tiendas*?' I don't even notice the change! On a day-to-day basis my vocabulary and Spanish would be at the level of talking to your mum and then at the higher level *cosas un poco más académicas* they'd be at the back, *me cuestan un poquito más, si me entiendes?* I have my cousins *y eso cuando estoy en España* and I will talk to them a lot as well. I feel like I have a store for English and a store for Spanish but there is a lot of crossover between the two. The language that would be a bit more higher level might have a store but I don't notice accessing it. I can quite fluidly go from English to Spanish; I don't go '*y ahora voy a hablar en español*' and 'now I'm going to speak in English'. It just sort of goes across so I don't notice having stores. When I've been speaking one language more than the other it's like I have two different mindsets and I have to bring the one I'm using less back to the front. At the start it's like that and then 20 minutes in it's just there and I don't have to go '*esto es una puerta*'. I find when I go over to Spain it's the same thing: for the first 10 minutes it's stilted and then it just clicks and you forget. Even with things like the way Spanish sings, *empiezas a hablar un poquito así* [intonation rising and falling] *y notas que estoy hablando como una española, mientras que al principio hablando así* [quieter voice with less intonation], *pensando en la palabra que voy a usar*. Have you found that many people talk like I do? I'm using my languages very actively. I would switch between my languages a lot because there are some words are just perfect in the other language but only works if the person you're talking to speaks that language! My mum and I always mix and match words. We always have our own words for things. There's always a real Irishism, like the kettle. I can't even remember the word for kettle is in Spanish. We just call it *el kettle*! We don't even say it with an Irish accent; you have to say *el kettle* with a Spanish accent! I would say I even get a bit more animated and Spanish. I'm quite an animated person anyway but in Spanish I am a bit more *estoy diciendo algo y cuando lo digo lo digo con* - you know - *con fuerza pero en inglés* when I'm saying something I set like this [flat] *pero en Espanola* you engage more with it. When I talk to my family *soy muy así y cuando digo algo quiero decirlo!* but with my Irish family it's much more calm and nice and pretty much perfect. In Spain we'd be like '*pero coño!*' There'd be a lot more swear words. Here, I wouldn't say 'Jesus, f\*ck's sake!' to my aunts, whereas in Spain you just curse all the time! Sorry, I've kind of gone off on a tangent there!

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim14: I'd say probably translating from Spanish into English will be easier for me than English into Spanish because of the vocabulary that might be more demanding than the vocabulary I would use talking to my mum! I'll see how it goes with the maths. I'm okay with maths.

AM: Do you think there are any aspects that you might struggle with?

Sim14: I think what I might find difficult is listening to a sentence, saying it and at the same time, listening to the next sentence and also listening to what I'm saying about the previous

sentence. I think that will be the hardest thing because if there were a pause after each sentence it would be a lot easier.

AM: How are you feeling before you start the activity?

Sim14: Grand! I'm a bit not nervous but I want to make sure I get the Spanish vocabulary. I know it's all in there it's just getting the word in time because I know I have it but it's frustrating when you can't access it immediately. I have to get into *el modo de hablar español. Como hablo inglés todo el día y luego tengo que cambiar el cerebro o cambiar la mente para hablar en español pero yo creo que ya me ira bien!*

**[Simultaneous interpreting from Spanish into English occurs]**

*Good day. I'm gonna talk about an activity that is been very popular in many eh cities. I'm referring to what we used to call eh eh what we used to call eh jogging, what's now called running. So, now I'm gonna start my discussion or my my my talk. Sometimes when you look around the a- around ehm eh and it would happen around eh what happens when people running and I'm not saying running when they are late for something or that they're in a hurry. I'm talking about what when I was young it was called doing footing and now and now it's more aligned to the word called running so I'm referring to people who run for fun or for sports and a lot of times I've asked myself why this eh why this eh activity has been so aplastante [laughs] and I've talked to people and I'm gonna talk to some of the reasons that those people eh say that they do that activity. Ehm first of all, for their flex-ibility that everybody says that it's an activity that they can do at any moment and, because of that, it's easily to... it's compatible with a professional life or with famil- with family life. One goes out to run whenever they can and when they can. As well as that, it is a sport that's cheap. In theory, everything that's... all that you need is a pair of shoes but but a lot of times you can actually spend a lot of mo- a lot of money buying ehm tops, eh iPods and anything you want. And fnally that you can do two things: you can go out to run as you want: whenever you want and whenever you want or you can also sign up to club of eh athletics.. a club professional can show you how to run and how to improve your style. Well, eh I don't know if I've convinced you that I would advise you to do it as because most people who have done it have said that it's an activity that eh eh holds on to you so eh it is an activity that may that can be very addictive. Good luck.*

**[Simultaneous interpreting from English into Spanish occurs]**

*Hola, me llamo Peter Hughes. Yo soy inglés y hoy voy a hablar sobre el el etiqueta no de de cogiendo el tren en Londres. Me imagino que mucha gente eh habéis eh visit eh visitado a Londres y habéis ido a Buckingham Palace, eh Big Ben, eh eh London Bridge y hay muchísimas cosas para ver en Londres pero la pregunta es cómo puedes ir a estos sitios? Londres eh si sabe que es eh es muy caro y para coger taxis y para ir en bici a veces es un poco peligroso so mucha gente coge el metro. Bueno, los ingleses eh eh se sabe que son un poquito rarillos en sus interacciones sociales y este vídeo te dice un poquito como nave- navegar eh el metro. So, lo que tienes que hacer es es hace es llegar a la estación de tren eh tener la entrada eh listo y para que no eh [shouts 'ah'] y s- eh eh. So, ten- tenéis que saber qué color eh vas a usar y en qué dirección y y y luego vas a estar en [shouts 'ah'] y cuando llegas tienes que bajar hasta el plataf- [shouts 'ah']. Eh se se mucha gente se si bajas ah, feck! cuando viene el tren a la estación de tren eh es importante dejar la gente bajar del tren a- eh antes de que subes al tren. Luego, cuando estás en el tren, te puedes sentar si puedes encontrar un asiento y si no encuentras un asiento tienes que bajar un poquito del tren para dejar un poco de espacio y si necesitas un asiento prioritario eh te sientas en el asiento cerca de de la puerta y es importante dejar este asiento a la gente que es un poco mayor o si tiene niños y esto es muy importante si coges el el tren y luego llegas a la al [shouts 'ah']. Gracias.*

**Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim14: To be honest, I found both directions kind of hard. I think the Spanish was a little bit harder because I didn't get the flow as well. I think because I've been speaking English more than Spanish I got the flow better, whereas in Spanish I got the flow for one or two sentences but when I got stuck on a word then I was a little bit behind and it took me a second to get the word and I'd forget what the person was saying. I think the proficiency of speaking the language day-

to-day would make me better in one way than the other. If you had been asking me the questions in Spanish I would've done way better in Spanish or it would at least have matched the English. So, it probably did match my expectations in that I didn't think I would be as good in Spanish or I might get a bit mixed up in Spanish. I know all these words! It was probably because my brain wasn't tuned into the Spanish as much as the English because I've been speaking English all morning. Maybe if I'd been speaking with my mum this morning would have been a bit easier.

AM: Do you think that this kind of activity would get easier with practice?

Sim14: I think so. Definitely. Getting into a pattern or a flow of listening to somebody talking and you talk over them and you get the next sentence and they get the next sentence would become easier. Practising things like listening better so you're listening to them and not focusing on your language but focusing on what they are saying. I think that was what my problem was in the Spanish. If I hadn't thought that I had to think about the words I would just have said them, rather than going what's the word 'escalator'?

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim14: I didn't feel nervous interpreting. It was really fun! It was a challenge and I loved that! I thought it was exciting and it definitely shows me that I know the stuff but it's the challenge of being able to move things around in your brain. I actually didn't find the maths difficult. It definitely added to the difficulty but not as much as I thought it would. I didn't care if the answer was right or wrong! It didn't really affect me that much at all, I don't think.

## Sim15

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim15: I wouldn't say I'm bilingual but my mum is Spanish and my dad is Irish. Every summer until I was about 18 we went to Spain for two or three weeks. My mum always spoken to me in Spanish but very colloquially, like 'pon la mesa'. I've always responded in English. My older sisters would have been fully bilingual but I always answered in English. It's a pity because I have lost a lot of Spanish. I would say I am more dominant in English but I do occasionally talk to my mum in Spanish. When I lived in Seville in fourth year I came back with a lot of Spanish because I was there for a long time but living in a country where everything is in English means you just lose it. I don't think I have the level of Spanish to be able to translate simultaneously. It takes me a long time to process information and then to feed it out. My languages are definitely behind two separate doors but when the Spanish door is open I'll never lose the English. If I'm in Spain for a month or two months I have it and I can dominate them both but when you live in a country where it's all in English the Spanish door closes and gets rusty.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim15: I don't think I'll excel in any area, to be honest! I'm just calling a spade a spade! I'm giving it a go. I think I'll be better working into English from Spanish because that's what I grew up with.

AM: Do you think there are any aspects that you might struggle with?

Sim15: Possibly finding words. I think the most frustrating thing is when you know the word and you've used it before but you can't find it. I've had experiences before where I know I know a word and I've used it before but I have to look up the dictionary and then I can't believe it when I see it because of course I knew it!

AM: How are you feeling before you start the activity?

Sim15: I'm slightly nervous. I'm getting quite nostalgic, if that's the word to use, because it is a bit sad that my mother is Spanish and I should be bilingual. They don't say 'mother's tongue' for no reason. I'm asking myself if this is a missed opportunity. It's nothing new but it's a realisation of the fact that I should be better at Spanish. If I was to compare myself to someone like me I would think I was actually doing quite well but when I compare myself to real bilinguals then I don't feel very good.

### [Simultaneous interpreting from Spanish into English occurs]

*Good morning. I'm going to speak to you about ehm about about a sport that's really become really popular. I refer to running, wh- which colloquial- is... OK now I'm gonna talk to about this. Ehm in something that is completely is seen everywhere in any kind of cul-de-sac or local area is running. This is this is some- this is a sport which is which is associated by jog by people jog. This is for people who are running in competitions or running for complete pleasure. Ehm we're gonna be talking to people who are who have said why they like to go running. A lot of people responded that they say they like it because it is very flexible and one person can go out running when he can and it is a very cheap sport: all you really need is running shoes but but if you want a lot of people can pay a lot of money to go running and to go running they can buy gorgeous sportswear and gorgeous spor- running equipment. People can go running out there running when they want and where they want or you can also go and join a club where they'll teach you how how to run and how you can improve on method of how you're running. Eh I really encourage you to try it because the majority of people who have said once they have tried it that the they become eh they become addicted to the sports.*



**[Simultaneous interpreting from English into Spanish occurs]**

*Hola, me llamo Peter Hughes y hoy voy a a hablar sobre el el etiquette de cogiendo un en el Tube. Eh me imagino que has cogido ehm el Tube cuando estabas en cuando estabas en Londres. Hay un montón de cosas que puedes ver en Londres pero la cuestión es donde cómo puedes eh cómo puedes eh ir a este sitios? Ehm en Londres el el eh trans- transporte porte públi- publico eh eh. Ahora, sabemos que la gente de de Inglaterra están conocidos sobre su divertidos o su forma de ser y eh cuando llegas y al al al Tube tienes que recordar recordar eh. Cuando estás en el Tube tienes que mirar dónde dónde quieres ir o dónde dónde de dónde quieres ir. Tienes que mirar a tienes que mirar el color y el dirección donde donde quieres ir. Re- recuerda que tienes que ser eh cuando s- tie- tienes que ehm OK. Cuando el tren llega al Tube tienes que parar cuando la gente están bajando del tren y y cua- luego tienes que estar en el Tube tram. Ehm en el sitio donde eh de propiedad ehm tienes que recordar que este es para la la persona que están embarazada a una persona que es más mayor.*

**Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim15: I think I was actually surprised by Spanish; I really was. Remember what I was saying about opening the door? I definitely felt that once I got into it I was opening the Spanish door. I actually found it easier working into Spanish. I was expecting to be way harder but I don't know if that was because of the level.

AM: Do you think that this kind of activity would get easier with practice?

Sim15: 100%!

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim15: Once I got into it the nerves passed. It's like anything. If you stand up to do a speech you're a bit nervous but once you start speaking you're flying!

## Sim16

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim16: My mother is Spanish. I have grown up and spent my whole life in Ireland. My mother encouraged us to speak Spanish and we would have gone to Spain every year for about four to five weeks at a time. I would have paid speaking to my Spanish family predominantly through Spanish. I wasn't great at speaking Spanish from the age of four to mid-way through secondary school because I didn't have much of an interest in it. In secondary school I developed for of an interest in it and used it on a more daily basis. Over the last couple years I really only speak Spanish whenever I'm in Spain. I never speak to my mother in Spanish because we've got to where we talk in English and even if I talk to her in Spanish she'll answer me in English. My languages are not on the same level at all! My English is much more dominant. I would say my Spanish is about 60% of what my English is. All of my day-to-day activities are through English. In terms of how my languages are stored, the English is there all the time. I have no difficulty in accessing English; it just comes to me. In Spanish, what I find is that when I've been conversing in Spanish for one or two days it becomes much more accessible. If I'm having to do it flat from not having spoken it for a while it takes me a while to get into it and more so the speaking than the listening. Listening is pretty much always there but speaking takes a bit longer.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim16: I would expect that I will be okay at the split attention because it will actually take the attention off thinking about the interpreting. I would have said that I would be better from Spanish into English but on the basis of the warm-up I think I will be a lot better working from English into Spanish.

AM: Do you think there are any aspects that you might struggle with?

Sim16: I'm going to struggle with any formal language and any less colloquial terms because my Spanish has solely come about as a result of interaction with people, as opposed to reading in Spanish. I don't do much reading in Spanish; I don't read articles in Spanish. My formal, reporting language in Spanish would be nowhere near as good as it is in English.

AM: How are you feeling before you start the activity?

Sim16: I'm a little bit nervous. I mostly just don't want to massively let you down!

### [Simultaneous interpreting from Spanish into English occurs]

*Good mor- good day. I'm gonna talk to about an activity it's an activity that's become very popular in certain cities. I'm referring to what the youth refer to as ehm to go running, commonly known as eh to go jogging. Anyone who is on the side of street corners will have noticed ehm new activities people running around and I don't necessarily mean running is in to get somewhere I mean running as I'm referring to what the youth refer to as eh footing or in this case going for a jog or, more commonly known as, running. I'm referring to people who run for pleasure or run for sports. I've often asked myself as to why this has become so popular. I've spoken to a couple of people I'll mentioned to you to mention to you the eh reasons that they've given to us as to why this has become so popular. Everyone tells me that it's something that you can do in any situation and it's very eh compatible with a professional life or with a family life. One goes out running whenever they can and whenever it suits them and it's also a very cheap sport: all you need is some shoes. What some people don't realise, though, is that you can spend an absolute fortune buying everything: clothes, iPads, whatever you fancy. You can do one of two things: you can either go out running for free, whenever it suits you, whenever you want, or you can join an athletics club where you have a professional who shows you how to run and to show you your your times. I don't know if I have convinced you but I hope that you try it 'cause*

everyone who who's tried it says that it's something that you get hooked on. It te- eh it becomes an addiction.

### [Simultaneous interpreting from English into Spanish occurs]

*Hola, my name is Peter Hughes. Soy de Inglaterra. Hoy te voy a hablar del e- etiquit del Tube. Te voy voy a empezar mi speech ahora. Imagino que algunos de tu vosotros has visitado a Inglaterra ehm en particular Londres a ver sitios como Buckingham Palace, London Bridge. La eh pregunta es cómo llegas a estos sitios. Londres es un ciudad que tener reputación de ser muy caro ehm taxis son muy caros y bicis son un poco difícil a ir por la ciudad. Si vas en el Tube la manera de navegar la sistema es un poco eh difícil. Lo im- importante a recordar es llegar en cola con tu billete ya y cuando tú has pasado la la eh cuando has pasado [unintelligible] mirar a las líneas a cualquier color necesitas usar la color que tienes que llegar. Cuando has descuido tu color tienes que bajar en la escaleras. Cuando llegas a la plaza tienes que bajar la plaza en lugar de quedar por la entrada porque si te quedas por la entrada las personas. Si bajas la plaza será más fácil entrar al tren cuando llega. Cuando hay el tren llega necesitas a esperar hasta los que se bajan han bajado antes que entras. Cuando estás en el tren te puedes sentar si encuentras una silla y si no baja la... Si alguien se ve que necesita una silla y tú tienes uno te tienes que mover y dejarlo a ellos: una eh señora que está embarazada o los viejos. Con un poco de suerte llegarás a tu destino sin ningún difícil y eh... yeah.*

### Post-Interpreting Think-Aloud Protocol

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim16: I found the into Spanish harder and the into English easier. Before I did the practice, that's how I thought it would be but following the practice I thought the reverse. The maths was easy with the English. I generally find that I'm pretty good when I have something to distract me: it means that I focus less and go onto autopilot. I was very much able to do that with the into English but with into Spanish - whatever way I was having to engage my brain - I couldn't separate the attention nearly as well; I couldn't go onto autopilot in the same way.

AM: Do you think that this kind of activity would get easier with practice?

Sim16: 100%.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim16: The nerves passed loads with the English one once I felt I was comfortable with it and I was very relaxed when it came to doing the maths at same time. Into Spanish, I felt that I struggled with the first one and that made me more nervous for the repeat version. I actually feel like I performed worse on the repeat, whereas I think I performed better on the repeat into English. Because I was aware that it wasn't quite right the previous time I started thinking even more, which meant that I felt a bit more under pressure. I didn't really feel like I didn't do a good enough job; I was more telling myself 'Come on! You need to do better!'

**Sim17**

**Pre- interpreting Think-Aloud Protocol**

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim17: My mum is Italian so as a very young kid I grew up speaking Italian in English. When I was three or four I commonly spoke both. From the age of six onwards I would say my Italian started to decline a little bit because I was in school and speaking English all the time and my mum speaks English so by the age of 18 I would say that my Italian had declined quite a lot. I could understand but my speaking wasn't great. Then I came to Trinity and did European studies and did Italian in third year as my major language. I went on a Erasmus there. When I came back from Italy my Italian was probably a C1 or C2 level so nearly perfect. If not, it was perfect pretty strong. Then a couple of years later I moved to Spain so in Spain my primary second language slowly started to shift. I'd say my first year in Spain I still spoke much better Italian and Spanish and then it slowly started to turn. Now, I think my Spanish is a good bit better than my Italian. Maybe my written Italian is better than my written Spanish but as a kind of language I feel comfortable conversing in I feel more comfortable in Spanish. I feel a lot more dominant in English than I do in my other languages. There are times when I'm very tired and - say I've been in Spain for a little while - a word in Spanish might pop in to a conversation in English and vice versa but generally speaking I feel like English is very much blocked off in my mind and then Italian, Spanish and even a bit of French kind of float about somewhere else in my mind.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim17: I think working into English I'll be fairly comfortable with. The maths is an interesting one: we'll see once we start. It's gonna be kind of fun.

AM: Do you think there are any aspects that you might struggle with?

Sim17: One thing I think I'll struggle with is the concentration. In the practice run there were times when my concentration dipped for a second and that means you've lost it so when I tried to claw it back again I think I just invented a few things, to be honest. Into the Italian will be the toughest part. The subject won't be difficult but in general working into Italian is more of a challenge. I guess one of the benefits of the warm-up is that I kind of know what they're going to be talking about so I'm coming in with a pre-loaded vocabulary, even if it is subconscious. For the real activity, I've been on a train before, obviously, so I have an idea what is going to say but I'm a little bit concerned because I won't be able to take a guess at the context.

AM: How are you feeling before you start the activity?

Sim17: No nerves. I'm feeling very curious to see how it goes.

**[Simultaneous interpreting from Italian into English occurs]**

*My name is Giovanni Sallicci and I'm gonna talk about kids and social networks for young people social networks. It seems from research that more than half of young people who use MySpace or Facebook talk about a high-risk or on-the-verge-of-legal content. The one study looked at the profiles of ehm [unintelligible] kids randomly chosen. They were under 18 years old. For f- 41% of them, they use social networks to talk about eh buying drugs and alcohol. Other percentages talked about eh sexual behaviour, while 14% of people spoke about violent behaviour. This will show that children involved in other behaviours like sports and religion had less of a tendency to talk about these high-risk issues. Another study looked at 190 profiles ehm of people looked at high-risk material. Researchers eh gave this feedback to the authorities and they received warning messages from the authorities eh to remove incriminating information from their profiles. These lads were also informed of the risks of exchanging information with unknown people that you might come across ehm on the Internet. Obviously, eh the majority of people who received these messages changed their profiles and removed eh information that was high-*

risk, eh such as that around using alcohol, eh drugs or eh violent behaviour. So, what can we conclude from this? We can see that behaviours that have always been issues for young people have now found another medium through which to be spoken about or discussed. Eh young people would talk about this in general when they meet as a group, eh away from the kind of presence of adults. Social networks have now created an environment where these discussions are reproduced almost in a natural way.

**[Simultaneous interpreting from English into Italian occurs]**

*Ciao, mi chiamo Peter Hughes, sono britannico e oggi ehm voglio parlare con loro dell'etichetta della metropolitana a Londra. Posso immaginare che molti di voi avete visitato Londra negli ultimi l'ultimi anni per visitare tutti eh i monumenti importanti di turismo che si trovano a Londra, eh per esempio Big Ben, London Bridge e c'è molte cose a fare a Londra però l'argomento è come arrivare a questi posti? Londra sempre è stata una città molto caro e allora come come si può viaggiare? Allora molti lo fanno in metro. I britannici sono conosciuti per la sua forma eccentrica e questo si può verificare eh nella metropolitana in come si deve navigare tutto il sistema. Allora, quando arrivi alla stazione, devi avere il biglietto pronto in mano perché ci sarà molta gente che va in fretta. Quando hai passato el barrera devi essere sicuro che vai nella direzione giusta. Devi sapere se vuoi andare nella linea rossa a Piccadilly e nella linea blu e devi sapere che colore e la direzione. Poi arrivi al escalatore e se può ascoltare che si deve essere fermata sulla destra e camminando sulla sinistra e questo è importante. Se non lo fai non essere non va a essere molto popolare. Poi quando arrivi eh nel binario devi andare un po' più in fondo perciò molta gente si si ferma in mezzo. Quando arriva il treno lascia che scende altra passeggeri e poi alzi nel treno. Se trovi un posto ti puoi sedere. Se no, meglio passare per il mezzo della carrozza. Se trovi un posto di priorità molto importante lasciarlo per un persona che viaggia che ne a bisogna: una signora eh incinta o forse uno dei anziani. Adesso sei pronto per viaggiare nel metro. Grazie.*

**Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim17: Yeah, I'd say it did. There were times when I'd say the English was a little bit harder and the Italian a little bit easier but once I actually got into it it was OK. The core problem for me is that my Italian is rusty enough. Even if I sat down and was able to listen to it and listen to it again and then repeat it I would still struggle to express exactly what he was saying. It was interesting to see that. I think if I did this back when my Italian was at its best then potentially they would be more equal than I thought but here going into it I just had the core vocabulary. The vocabulary and the grammatical structures are rusty that just pulling them out was tough enough. As for the maths, I somehow went from odd numbers to even numbers and back again so something went wrong there but I think it probably focused me a little bit more. It made me a bit more casual about the translation; it made me think 'whatever' about that so I feel like I was a little bit more relaxed when I was doing the maths. Then, also, having heard it first time made a pretty big difference.

AM: Do you think that this kind of activity would get easier with practice?

Sim17: Yes, absolutely.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim17: I didn't feel any stress or anxiety but then I think I was very much aware that this is a safe environment to be doing it in. If there were 50 people here it would be a different story.

## Sim18

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim18: I think going to be better working into Italian because I'm more used to listening in English.

AM: Do you think there are any aspects that you might struggle with?

Sim18: Catching all the Italian to translate into English because I think I will have difficulty while interpreting with missing points as we go along. I think the maths will distract me a little bit.

AM: How are you feeling before you start the activity?

Sim18: A little bit nervous. I'm also curious to see how I get on. I'm a bit of nerd so I feel like I need to do well to impress you. I'm a bit of a perfectionist and I want to get it right!

### [Simultaneous interpreting from Italian into English occurs]

*My name is Giovanni Sallicci and now I'm gonna talk about young people and social networks.. social media. It seems according to cer- certain studies that more than half of young people are active on my fig- MySp- or Facebook, uhm participating in risky behaviours or behaviours which skirt the edge of what's illegal. Uhm paediatricians and specialised doctors conducted a study covering 500 18-year-old young people uhm and in 41% of cases they found that people were using social media to share information about drug use or alcohol use. In 24% of cases young people were talking about uhm sexual acts and in 14% of cases uhm they were beginning discussions about violent activities or general violence. In social groups that are connected to religion or sport uhm the amount of people who talk about these at risk behaviours are lower. Researchers shared the results with authorities. After, the profiles received a warning message, which invited them to change their behaviour and get rid of any information that was related to criminal activity. Young people were also taught about the risks of sharing this kind of personal information with strangers online. Almost all the young people who received a warning message did change their behaviours. In particular, any information about the use of alcohol or drugs was taken off their profiles and anything to do sexual activity. What can we learn from this? We can learn that these ki- types of behaviours, which have always formed a part of social interaction at a young age, are finding a new means of expression through the Internet and social networks. Young people will always talk about these forbidden topics when they find themselves alone in groups together. The Internet al.lows young people a different option talk about these activities, without uhm adults overseeing them.*

### [Simultaneous interpreting from English into Italian occurs]

*Buonasera. Mi chiamo Peter Hughes e sono inglese. Oggi vi parlerò dell' dell'etichetta del comportamento sulla metropolitana in Londra. Uh immagino che molti di voi avete visitato Londra negli ultimi anni per vedere i siti turistici come Buckingham Palace, London Bridge. Ci sono un sacco di cose da vedere ma la vera domanda è come si arriva a questi posti? Londra è una città molto costosa. Uh i tassi non si possono considerare e le biciclette non sono molto non non è molto facile prendere la bicicletta. Un sacco di gente prende la metropolitana. Gli inglesi sono molto conosciuti nel mondo per la loro eccen- eccentricità nelle interazioni sociali e allora i vari modi di uh seguire questo sistema sono molto importanti. Si devono seguire i i questi punti: allora, quando arrivi alla barriera devi avere il biglietto già pronto perché ci sarà un sacco di gente dietro di voi chi s- è in fretta e non vuole aspettare mentre cerchi il biglietto. Uh devi già sapere dove vuoi andare... se vuoi andare sulla linea centrale rossa, sulla linea blu per Piccadilly, sulla linea Victoria. Devi già sapere che linea prendere e in che direzione devi arriverai. Poi, arriverai al- escalator [laughs] allora, non ci si deve confondere perché è molto difficile cambiare e non sarei molto popolare. Quando arrivi giù alla piattaforma è meglio*

*andare via dall'entrata perché c'è un sacco di gente che aspetta sempre in giro all'entrata e allora è difficile salire sulla metropolitana. È meglio passare giù per la piattaforma. Quando il treno arriva è importante ricordare di lasciare la gente scendere del treno prima di salire. Sennò, si crea un sacco di frustrazione tra la gente. Quando si sta nel treno se trovi una sedia libera vi potete sedere, però ci sono certi posti che sono riservati. Allora, se siete in un posto di priorità se sale in treno una signora incinta o o una persona anziana è molto importante di cedere il posto a a queste persone. Speriamo che poi arriverai alla destinazione senza alcuni problemi.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim18: Into Italian is trickier because of the vocabulary but I think that into English is harder because of how the source language is structured. I found the maths a little bit distracting, yes, but I did manage to write quite a lot of numbers. I just wouldn't check their accuracy! They're just random numbers!

AM: Do you think that this kind of activity would get easier with practice?

Sim17: For sure! Obviously! Has anybody said no?!

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim18: I think once you doing it the nerves pass and you get into the zone. You have to stop thinking about it and just do it. Otherwise, it's just sink or swim. If you miss a sentence you're lost. You have to just move on.

## Sim19

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim19: I'm half Italian so when we grew up my mum spoke Italian and my dad spoke English. When I went to school I did it for the Junior Cert in the Leaving Cert but I didn't study it. I just looked at a few past papers with mum. Then my Italian was very general and the only Italian I spoke was with my family. Then, in college I did in first and second year. I couldn't continue it as a major but I got a good grammatical background. That's pretty much it then. I feel more like a native English speaker also speaks Italian. When I was younger I felt more bilingual in both because I would spend my whole summers in Italy so out of instinct I would speak Italian. Since the age of 16 I haven't been going to Italy as much so it's definitely getting a bit lax now. Definitely native English speaker with Italian, rather than 100% bilingual. The way the two languages are stored in my mind there is a lot of crossover. I do Spanish and French as well but with them it would be more like with English in that I'd pop in and out of them but with Italian it's more just instinctive I think, probably because my mom spoke to us in Italian when we were younger.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim19: I do get distracted quite easily in general so I feel like I probably will get distracted. I'm not too sure what direction I'll feel more comfortable working into. I was only just in Italy a few weeks ago and I found the Italian news reports difficult to follow. I don't know if the language that the use so perhaps I'm better in the other direction. I don't know. I would have thought I would be better into English because it comes more naturally to me.

AM: Do you think there are any aspects that you might struggle with?

Sim19: Probably just keeping up because sometimes if there's one word I don't understand - and I've noticed this when doing listening activities in college - sometimes I get distracted for the next couple of words.

AM: How are you feeling before you start the activity?

Sim19: It's exciting! I love this kind of stuff. I've done languages my whole life so I find anything like this really cool, especially with my brother coming in. There's a bit of competition now!

### [Simultaneous interpreting from Italian into English occurs]

*My name is Giovanni Sallicci. I'm gonna do a speech about young people on so- social network. So, a- according to some studies it shows that over half of young people who use MySpace or Facebook ta- say that they be- behaviour of high risk..of legal limits. Teenagers psychology 500 young people of 18-year-olds eh chosen randomly. 40% of the social...they were used for the like ehm drugs and alcohol. There was a lot of sexual behaviour found on lots of them. 14% of the profiles or had discussions or chats of a a violent behaviour. It also shown that in young people in other activities like sports or religious religion there is a small minority of of eh. Another study showed that hundred and 190 profiles sh- the profiles showed high risk. The eh people showed these profiles to the authorities. Each profile got a warning email th- in which they have to modify their profile and eliminate all this ehm information. They were all they were all taught about these risks, like personal ehm exchanges. Obviously, almost a- all these people have received this the warning email have modified their profiles, especially deleting the information concerning alcohol use and drug use and ND sexual behaviour. What can we take from this study? I would stay that it talks about a situation in which the behaviour that has always been eh among social networks and young people. This yo- ... young people have always talked about prohibited arg- things discussions wh- when they were in groups. When they're ehm far*



away from like.. Eh virtual groups have been made where these behaviours were natural. These things naturally come up in conversation, kinda thing.

**[Simultaneous interpreting from English into Italian occurs]**

*Buongiorno, mi chiamo Peter Hughes. S- s- eh vengo dall'Inghilterra. Oggi vi parlerò di come si prende il Tube in eh Londra. A Londra. Immagino che molti di voi avete visitato Londra negli ultimi anni per visitare tutti li i posti turistica, per esempio Buckingham Palace, Big Ben, la il Ponte di Londra. C'è molte cose di fare a Londra ma la domanda è come si arriva a questi posti? Londra e also conosciuta come un posto molto cara. I taxi non si prendono. Andare in bicicletta non è una cosa molto fatta non e non ehm. Molte persone prendono el Tube; che e il treno sotto terra. Ehm gli inglesi sono conosciuti per essere eccentrici eh. Prendono il Tube eh il modo di prendere il Tube e molto importante. La cosa che devi fare e e ricordarti di questi ehm. Quando arrivi alla staziona hai devi avere il biglietto pronto perché tante persone han- non devi tenere il.. Quando attraversi la barriera devi devi essere sicuro che vai alla direziona si- sicura. Se vuoi andare sulla linea rossa o la linea azzurra per andare a Piccadilly o l'altra per andare a. Devi sapere in che direzione vai e.. Poi arriverai all'ascensore e e sentirai l'annuncio che ti dice di andare alla sinistra o sinestra. Quando arrivi al binario devi essere sicura che vai vai giù il binario. Tante persone stanno fuori l'entrata che causa molto stress per tanta gente quindi se vai giù il binario eh vedrai che è molto facile più facile per andare sul treno. Quando il treno arriva ricordati di stare indietro per lasciare che gli altri scendono prima che sali. E molto importante che causa molta eh tensione tra la gente. Quando sali sul treno sul Tube se c'è un posto ti puoi sedere sedersi ma se non trovi un posto devi andare giù per il treno. Se sei in un se- sedia di priorità devi dare la sedia a una persona di priorità, per esempio una donna si- incinta o una donna ehm vecchia. Poi arrivi al tuo stazione e poi. OK. The last bit I messed up a bit.*

**Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim19: I guess so. I generally get kind of flustered with that kind of thing so I wasn't expecting it to be perfect. It's been really interesting. I think I was faster working into Italian but the quality of the one into English was better because obviously my English is better and it makes more sense. However, I think hearing in English made me think quicker in Italian, whereas working from Italian took more time to get into it.

AM: Do you think that this kind of activity would get easier with practice?

Sim19: Yes, I think so. If you think about it from school and college, comprehensions generally do get easier the more you practise them. Obviously, this is a different because you have to speak but you would hope that it would get easier!

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim19: I was never really sure when I was younger whether I want to do translating or interpreting but then I always went towards translation because I would be quite an anxious person. Doing this kind of thing in public would bring on a panic attack. Even for oral exams they'd always go well enough but I would always be so panicky. So, I think translation suits me better but I was really interested to see how I would react. I didn't really experience any stress but that was because it was just with you here but if there had been maybe five people then I think I would have been a lot more nervous.

**Sim20**

**Pre- interpreting Think-Aloud Protocol**

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim20: My father was an Italian diplomat and when I was born in 1961 he was posted here to Dublin. I was eight months old and my father decided that he would put all of this children through the English school system. We stayed in Ireland for six years and then moved to Cairo for four years and I went in English school there. Then he was posted to Melbourne, where I finished my secondary school and did my first year at university. He was posted back to Dublin so I finished my university career here in Trinity College. I was raised bilingual by my parents. I also studied Italian in school. I took it for the equivalent of the Leaving Certificate and I studied French and Italian here in Trinity. Let's not forget my 28 years of work in the Italian embassy, which has affected my bilingualism! Nonetheless, English would be my first language. Italian would be my native tongue but English would be my first language: the language in which I think; the language I would feel most at ease in. I am fully bilingual, although I don't feel there is any real, true bilingualism. There is one dominant language and one weaker, recessive language. A bit like with genes. So my dominant language would definitely be English. My siblings had the same upbringing as me and we always speak English with each other. My parents will go back and forth between English and Italian but it's instinctive for us to speak in English with each other, although we are children of Italians and have perfect Italian. It's instinctual. In terms of how my languages are stored, I think it's mixed in together when you acquire a language from infancy. I think it does tend to merge and mix into together because as a child you're not conscious of speaking different languages: you're just conscious of having to address mum in this and dad in that or school in this language and mum and dad in that language. I don't think in my case it's compartmentalised. I think it would be for someone who acquires it in school. For example, there are professors of Italian in Trinity College who are completely bilingual but I think in their case it's compartmentalised. I find that my French is compartmentalised. French, behind Italian, and I would use my Italian a lot with my French. The two of them I would visualise together, as opposed to the English. The Italian would help me with my French because they're both Romance languages. My dialect, in fact, would help me a lot with French. In northern Italian dialect there is a lot of French influence. My French involves a more conscious thought process and it would be less of an instinctive language process, as it is Italian.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim20: I think the maths will probably throw me. I think I will be okay doing the simultaneous interpreting. I might not be able to pick up everything but not because I don't know how to translate it but because it said so quickly because I can't hear it properly. From the test run, the content of what was translating wasn't beyond my reach. I think into English would be easier for me because that would be my stronger suit, although I do work from English into Italian all the time in my employment. I would have more ease going from Italian to English than vice versa.

AM: Do you think there are any aspects that you might struggle with?

Sim20: Technical terminology or a lot of economic, political stuff but everyday terminology isn't a problem.

AM: How are you feeling before you start the activity?

Sim20: Not anxious or stressed. I'm Italian; we don't let these things faze us!

**[Simultaneous interpreting from Italian into English occurs]**

*My name is Giovanni Sallicci and I am going to talk about young and social media. It seems from some research that it emerges that more than half of young people who use MySpace or Facebook discuss behaviour at high risk or at the limits of of le- legality. These are official*

*studies undertaken by paediatricians and specialised doctors, psycho- psychologists and scientists. One study took on board eh the profile of eh 500 students under 18 years of age. 41% of cases networks social networks were used to exchange information on the use of drugs or alcohol. In 24% of the cases the young people discussed behaviour sexual behaviour, whilst 14% of the profiles lay out discussions associated and centred on violent behaviour. It was also underlined that amongst young people in eh eh young people involved in other eh activities, such as sport and religion, there is a lesser tendency to discuss these arguments these risk arguments. Another study looks at 190 profiles where\*to the authorities and half of the profiles received a message of advice to which which invited the applicants to eliminate in- incriminating information. The young people were informed on the risks which come from the exchange of information personal information with unknown persons with whom one can can mee- meet on the net. Obviously, almost all the children who received this email modified their own profiles. In particular, they eliminated information regarding the use of alcohol and drugs and sexual behaviour. What can we deduce from all of this? I think it is obviously a situation in which behaviour which have always been seen as in c- in so- social contexts have found the possibility of exp- to express themselves through a network of a social network. Young people have always discussed forbidden topics when they find themselves together in a group far from the presence of their of adults. Networks social networks simply creates a virtual group where these this kind of behaviour and sharing of of informa-shaken are being proposed naturally.*

**[Simultaneous interpreting from English into Italian occurs]**

*Buongiorno. Il mio nome e Peter Hughes. Sono inglese e oggi vi parlerò dell'etichetta per usare il Tube a Londra e inizierò ora. Posso immaginare che molti di voi che avete visitato Londra negli ultimi anni che avete visitato tutti i siti turistici come Buckingham Palace, Big Ben e il Ponte di Londra London Bridge e tantissime cose da vedere a fare a Londra. Comunque, come ci si arriva a questi posti? Londra è conosciuta anche come una città molto costosa: i tassi sono di- fuori discussione. Il ci-- e non si può avere veramente usare le biciclette perché non è sicur e dunque molte persone usano la metro la so- sotterranea. Gli inglesi inglesi sono conosciuti come per avere una un'interazione abbastanza strana e si può vedere sul Tube. Ed è importante come si può usare il sistema. Quello che dovete fare e ricordare questi passi: una volta che arrivate alla stazione del Tube preparate il vostro biglietto alle barriere perché tante persone correranno davanti a voi dunque non rallentate il passo. Una volta che avete superato le barriere assicuratevi di andare nella direzione giusta: su quale linea se volete andare sulla la la red Central Line o la linea Piccadilly o la linea azzurra per Victoria. Sapere quale colore e in quale direzione state andando e poi arrivate alle alle scale mobili. Questo è molto importante che vi vi diranno di stare a o destra o a sinistra. Non confondetevi sennò non sarete molto più popolari. Quando siete sul binario camminate in fondo al binario non rimanete all'entrata del binario perché potrebbe creare stress per tante persone. Camminate lungo il binario vedrete di potere entrare nel Tube con più facilità. Una volta che il treno arriva sul binario spostatevi e lasciate scendere la gente sul Tube. E molto importante perché anche questo può creare tanta frustrazione e stress fra persone. Una volta che siete sul Tube potete sedervi se trovate posto e oppure camminate lungo il corridoio del Tube. Se vi sedete nei posti prioritari cioè quei vicino alla porta assicuratevi di lasciare il posto ad una persona che ne avesse bisogno: una signora incinta, una persona anziana. Anche questa è una cosa sociale una regola sociale molto importante mentre si viaggia. E poi arriverete alla vostra di destinazione senza problemi e potete eh godere il resto del vostro viaggio.*

**Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim20: I was a little bit double-footed in the sense that I haven't done this sort of thing ever. I mean I have done it in a one-on-one situation with people but it's never been in a context where you have three minutes of a set speech. For example, if I've interpreted for people and haven't been able to understand I've stopped and asked the person a question and then I would relay the answer to the other person. I would have had a piece of paper, so my interpreting wasn't simultaneous. It was always back and forth and never in a three-minute context. Once or twice a had to do simultaneous interpreting over the phone but this is the first time I've had a block of translation. I know that the Tube isn't difficult but sometimes you don't quite get what he's saying and you feel like it's moving quickly and you feel like you haven't translated exactly what he said but he is still going on and you have to catch up. It's interesting! It didn't panic me or it didn't fluster me; I took it on the chin and went with it because that's not what I've been doing for 28

years in the embassy! You just go!!! Because, in the Tube speech, the terminology was easier, you could modify it quite quickly in Italian so I found that the level was equally okay in both languages. In fact, I found it easier to say some things in Italian than I did in English!

AM: Do you think that this kind of activity would get easier with practice?

Sim20: Oh yes, definitely. Absolutely! It goes without saying.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim20: I didn't feel stressed. However, I don't know if the heart rate monitor will show that! I was quite happy! Maybe at the very beginning. When you're sitting here and you realise that this is happening the stress levels go up.

## Sim21

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim21: I was born in Italy and I came here and I was two so I didn't do any schooling in Italy. I did my studies in Ireland. My parents have always spoken to me and my siblings in Italian and I would have developed my English through school. I feel like my languages are at the same level but sometimes I find it easier to say things in English. I'm always in college speaking with English speakers so it would be rare for me to find other Italian people talk to, which means that sometimes specific words won't come to me in Italian. In terms of how my languages are stored, I feel like I have an English store and an Italian store. I find with work that it can be difficult to move from one store to the other. I am afraid that I'm going to say something wrong to my customers because I'm dipping into one store and then into another.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim21: Even in the warm-up session it was easier to translate English to Italian because I always do that but I never translate Italian and into English. I found myself thinking about how I was having to translate it and I think I struggled more in that direction: Italian to English.

AM: Do you think there are any aspects that you might struggle with?

Sim21: Potentially working into English and also the maths. I'll probably only managed to write two numbers down!

AM: How are you feeling before you start the activity?

Sim21: I feel alright! I'm not nervous or stressed.

### [Simultaneous interpreting from Italian into English occurs]

*Mi-my name is Giovanni Sallicci and I'm going to do a speech about young people and about ehm.. Ehm some research shows that more than half the people more than half young people that use MySpace or Facebook ehm sh- show some sort of behaviour that is a bit worrying. Ehm some social.. This has come from even ehm ehm oh my God doctors and ehm. The research was taken from ehm young people between the ages of 18 and and these this research was used ehm. The 24% young young people were used ah for to discuss ehm drugs and sexual contact and others were ehm acts of violence. It was find that ehm other young people that where that were kind of ehm that interact with sports and other things ehm have ehm have less of a chance to kind of discuss these kind of ehm risky topics. Ehm risky behaviour.. ehm these kind of these behaviours were ehm were explained to the authorities to kind of to kinda ehm to eliminate the information and ehm obviously half the people that have that have received the ehm the kind of alert email have eliminated their ehm profiles and their use of alcohol and their kind of sexual interactions. What can we ehm what can we gain from all of this information? Is that ehm that anyone who was involved with this have found possibility through the network and social through social network through social media. Ehm most of the time it happens when they're kind of in a group. Ehm the Internet creates ehm ehm online chats where where you can kind of share your information with other people.*

### [Simultaneous interpreting from English into Italian occurs]

*Ciao, mi chiamo Peter Hughes e oggi voglio parlare del Tube in a Londra. Inizio il mio... il mio... Posso immaginare che un sacco di voi ha hanno visitato Londra negli ultimi anni per visitare tutti i diciamo i posti turisti che Londra ha da offrire, come London Bridge. Ci sono un sacco di cose da fare a Londra però la domanda è come ci arrivi a questi posti? Londra è conosciuta come un posto che è molto caro e specialmente per il trasporto. Eh andare in bicicletta non è sempre in modo più f- eh facile per andare... Un sacco di un sacco di le persone*

*inglesi sono conosciute per le loro diciamo eh il loro modo di diciamo cordiali e è molto importante. Cosa devi fare? Eh ricordarti eh di i prossimi così: e come arrivi alla Tube devi avere il biglietto devi avere il biglietto è così non non fai la fila dietro di te. E una volta che passi la barriera ti fa- ci saranno delle indicazioni dove di dove devi andare per la diciamo la linea blu per Piccadilly e e ti diranno anche in quale direzione. Poi arrivi all'ascensore e ti dicono devi stare alla destra e camminare a sinistra. Devi camminare giù giù devi dev- andare in giù per la piattaforma. E c'è un sacco di di stress con tutte le persone in giro, quindi se cammini per in giù e più facile trovare [unintelligible]. Quando arriva il treno alla Tubes. Certe questo tante volte causa frustrazione. Qua- una volta che stai dentro il Tube ti puoi sedere se trovi un posto. Se non trovi, cammina verso la stanza. Se vedi qualcuno diciamo un qualcuno che e anziano o disabile o una donna incinta se vedi che gli serve il posto se stai proprio vicino alla porta all'entrata fai in modo che ti alzi per queste persone. E speriamo eh si spera che arrivi alla tua destinazione e in tutto il tempo che hai.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim21: Yes. From Italian into English was harder. With the into Italian I found that I was saying more things and actually making sense.

AM: Do you think that this kind of activity would get easier with practice?

Sim21: Yes. Like I was saying, even with the English one the more I was doing it the more it started to become easier. At the start I was kind of struggling but I found it easier the second time around.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim21: When I was actually doing the interpreting I was kind of like 'Oh, God' and I actually stopped and thought 'I don't know what to say next' but that only lasted for about the second. I didn't feel panicky or stressed while I was doing it. I am someone who will stress and freak out about everything but the only reason I'm not stressed out now is because I know it's not a test. I know it's not going to be used for anything.

**Sim22**

**Pre- interpreting Think-Aloud Protocol**

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim22: From birth my mum would speak to me in Italian and every summer and sometimes in the winter we would go down to Italy to visit my mum's family. I would speak solely in Italian with them. I would interchange between English and Italian but mainly I would speak Italian. My learning of Italian was entirely oral and I learned it the same way I learned speak English: like a sponge. I go to Italy as much as I can and my friends and family only speak to me in Italian. I understand the dialect of the area and then I can speak a little bit of it. It was never like sitting down in a classroom and learning grammar. If you asked me to write in Italian I would struggle but I've never had too much of a problem when speaking. I am more dominant in English because I speak it most of the time but if I spend enough time speaking Italian I notice that it can override the English and I start thinking in Italian to a certain extent. If I'm speaking Italian for an extended period I will come back to Ireland and I will struggle with certain things. As you were saying, certain things in Italian make sense in Italian but don't make sense in English so I would almost be translating from the Italian, asking myself how you say that in English. People are always fascinated by this in me. Going back to the personality traits, I think I was younger I was always quite nervous. People always asked me to speak Italian and I would always say no, whereas now I don't mind. I've never thought about how my languages are stored. I think my languages are separate, instead of it all fitting in one knowledge bank. I think that there are two banks that I feed from. I think that they are separate things. I do flick between the two quite easily and I don't feel like it's a physical flip but it's not like it same; there are two definitely different knowledge banks.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim22: I think I will be better working into Italian. I've never interpreted before and I noticed in the warm-up that I found working into Italian a little bit easier. Grammatically, I might not have been as good into Italian. I don't know if I'll go into the zone with the maths. I don't know how I'll react to the maths. I found the warm-up difficult but it wasn't like I couldn't do it. Possibly with the maths as an added distraction I might find it more difficult.

AM: Do you think there are any aspects that you might struggle with?

Sim22: I don't think I'll struggle with maths because I find maths fine. I might struggle with doing the translation simultaneously but then again having translated it already once it might be okay. I might struggle with the concentration side of it; having to concentrate and multitask. I'm not amazing at multitasking! That might be difficult but we'll have to wait and see.

AM: How are you feeling before you start the activity?

Sim22: I feel okay. There was a little bit of stress in the warm-up when I started to struggle with the translation a little bit. There was a bit of silence and I was trying to find the next point to latch onto. A little bit of anxiety but nothing crazy. It's an exciting thing! It's a really cool, interesting thing you're doing!

**[Simultaneous interpreting from Italian into English occurs]**

*My name is Giovanni Sallicci and right now I'm just gonna do a talk on uh youth and social networks. It seems from certain research that it's emerging that more than half of young people who use MySpace or Facebook discuss uh things that are high-risk or at the limit of legality. Uh speaking of uh their just predators or uh. A study has uh taken an exam of research of uh 500 youths of 18 years of age. Uh 41% of the youths on social networks were used uh uh the social networks to discuss drugs and alcohol. Uh 24% of the cases uh the users were talking about sexual things and 14% of the profiles were uh talking about things were uh some violent things*

*and it was revealed that uh the youths uh involved in sports or religious uh groups they had uh less uh tendencies to speak about these risky subjects. Another study uh looked at uh 190 profiles that uh inf- uh information uh that was risky was taken from them and these profiles were uh told to the authorities and uh the youths uh... Obviously, nearly all of the youths who uh received the the mail would uh modified their profiles, like uh eliminating the information that was uh concerning the use of alcohol or drugs or uh sexual activity. What can we deduce from all of this? It speaks about a situation where uh behaviour are verified. From always, youths are uh speaking about uh forbidden things in groups in person, without the adults uh the eh social networks essentially create uh a virtual sphere where they can share this uh information with each other. It would naturally occur.*

#### **[Simultaneous interpreting from English into Italian occurs]**

*Buongiorno. Mi chiamo Peter Hughes, sono dalla Bretagna e oggi ti parlerò della etichetta della metro di Londra e mi comincio adesso. Posso immaginare che molto di voi avete visitato la Londra nei ultimi anni a visitare tutti i posti turistici come Buckingham Palace, Big Ben, eh London Bridge eh. Ci sono tante cose da fare a Londra però la quest- la domanda è che come puoi arrivare a questi posti? Londra e anche conosciuta di essere molto caro e andare in bici non è molto eh... tante persone prendono la metro per andare in giro eh le persone Bretagne sono un po' conosciuti per l'eccentricità e essere molto educati eh nelle loro interazioni sociali e si vede sulla Tube. Eh co- come si naviga la sistema è molto importante. Bisogna ricordare di quando arrivi alla stazione devi avere il biglietto pronto perché ci sarán tanta gente che vorrebbero passare velocemente che hanno il biglietto di- dietro di te. Eh subito [unintelligible] su questa eh attraversate la barriera bisogna guardare dove devi andare se devi andare sulla linea rossa o quella scura blu per Piccadilly or quella eh blu chiaro per la Victoria uhm. Poi dopo arriverai all'ascensore e ci sono dei annunci de- che ti dicono di di essere alla destra o alla sinistra eh eh bisogna per forza farlo senno' la gente non ti piacerà. Eh e poi devi essere sicuro di entrare sulla sul binario e camminare giù del bi- binario perché se cammini giù lo troverai più facile per eh salire sulla Tube. Quando arriva il treno eh devi essere sicuro di uh di andare indietro un po' delle porte perché hai c'e ci sarà tanta gente che che uscirà del treno e dopo che sono usciti e quando entri sul treno eh puoi sederti e se non trovi la sedia bisogna eh andare du del della ehm della del treno perché non ci sarà lo spazio e se c'è bisogno se qualcuno ha bisogno di sedersi come le donne incinte o dei eh della gente più vecchia bisogna per forza dargli la sedia perché c'è l'etichetta per eh subire eh sul treno e dopo aver fatto così puoi eh metterti comodo e divertire il eh il viaggio sul sul treno.*

#### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim22: I think that going into English was more difficult because I was more critical of myself and English would be my more dominant language. I was more caught up on making sure that everything I was saying was okay and that it was a correct translation, whereas going into Italian I didn't stress out as much about the Italian translation because I know that my Italian isn't as good as my English anyway. What I was speaking in Italian I could hear myself saying it but I wasn't checking it or making sure that it was correct. With the English, whilst I was doing it there was a little bit of correcting. I struggled with the numbers, which I didn't think I would. I was slow with the numbers but think my concentration was more on the translation. I do have a certain confidence now that I have gained over the past 25 years with languages so even if I was to not do as well in the translation it wouldn't bother me as much as it used to. I think in my interpretations what would be noted is that - grammatically speaking - you could compare somebody like me who absorbed it as a young child with somebody who studied it for the majority of their adult life from the age of 16 to 24, for example. I'd imagine that their interpretation would be more grammatically correct without them having to put in the extra effort that I would have to if I was trying to use of correct tenses. With the into Italian I wasn't as worried about what was correct and what was incorrect because I was working with an innate thing, a sense of feel: if it felt right then I said it, whereas going from Italian to English - because I studied English and because I went through the stress of the Leaving Cert - I naturally went to the more analytical, asking myself if it was good. With the Italian I didn't care; I was just doing it. I've always been a staunch advocate that immersion is the best way to learn a language. If you don't have a choice or if you're stuck in a place where you then have to communicate with people you will find a way to communicate. When you're interpreting you're in the zone and you go on automatic to do one thing and in your mind you're doing something else. I was talking to myself



while I was doing the maths because I realised I was taking away five instead of six so that was happening at the same time.

AM: Do you think that this kind of activity would get easier with practice?

Sim22: Yes, definitely.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim22: I didn't think I was going to get too stressed out about it beforehand so I think that met my expectations.

### **Sim23**

#### **Pre- interpreting Think-Aloud Protocol**

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim23: I think the mathematics will distract me. I feel my preference would be from English to Italian. Since I was raised in Italy, I think Italian is the stronger of the two languages. Although, now, living here for six years, I tend to think in English so for me it would be sometimes hard to find the right word in Italian. It happens and it happened once when I was translating in the warm-up from Italian to English. It sometimes happens also in the other direction.

AM: Do you think there are any aspects that you might struggle with?

Sim23: If I don't understand the topic because it's too technical or too specific, with specific vocabulary, then that could be an issue. I actually interpreted once a talk. An English professor came to Perugia and he was speaking and I was translating live for the public, standing beside him. He was talking about chemistry and I really did not know very much about chemistry at the time! I might struggle with this split attention test. I don't know because I've never done it before but I might get the maths wrong.

AM: How are you feeling before you start the activity?

Sim23: A bit anxious. Mostly curiosity. It's something I've not done before, despite having the previous experience of translating after every few sentences. I like translating because I like speaking languages. I speak Spanish and French also. I'm into languages and I tend to socialise with all different types of people in lots of different languages.

#### **[Simultaneous interpreting from Italian into English occurs]**

*Giovanni Sallicci will talk about the young people and the social networks. From research, half of the young peoples the users of Facebook and MySpace they discuss about eh high-risk behaviours at the limit of eh legality. It's eh official studies by doctors, psychologists focusing on adolescents. 500 profiles users have been collected below under 18 years old. 41% of these communication were talking about drugs use and 14% about sex behaviour I think and the other left part in eh violent behaviour they were talking about vio- violent behaviour and any community about sports and religious there is a less propension to speak about high-risk behaviours. Eh the researchers have actually communicate this to the authorities and half of the users of the actually received any eh received an email a communication where they actually were forced invited to cancel all the information and and they were actually inform about the risk of actually talking about this kind of topics on the net with unknown people eh strangers. So, mostly youngs have deleted the informations and especially private eh information regarding use of alcohol, drugs and sex eh behaviours. So, it's an expression of eh a common eh form of communication among youngsters and the topics are always common but now is applied to social to the webs to the Internet so it's it's a new phase of the I guess of the modern era.*

#### **[Simultaneous interpreting from English into Italian occurs]**

*Parleranno dell'etichetta nella metropolitana di Londra. Molti avranno visitato Londra nel eh Londra nei passati mesi e nei passati anni avranno visto le maggiori attrazioni turistiche di Londra. Il problema è come ci si sposti tra un monumento e l'altro e, visto che Londra è molto costosa, come prendendo tassi e altri mezzi di trasporto? Quindi, molti molte persone prendono la metropolitana. Gli inglesi sono molto con- sono molto conosciuti per la loro eh etichetta di essere educati e al livello di comportamenti sociali, che è molto importante. Quindi, la cosa più importante di ricordarsi sono questi step: avere il biglietto pronto alla barriera perché ci saranno parecchi persone che vorr- vorranno entrare. Dobbiamo cercare subito la giusta direzione per capire se quale quale linea nella metro dobbiamo prendere se quella blu di Victor... e vedere quale colore e quale direzione. Una volta raggiunta la scala mobile ci sarà un annuncio che ti dirà di fermarsi sulla destra e camminare sulla sinistra. Se uno non lo fa diventerà subito impopolare. Arrivata alla piattaforme è importante muoversi dall'entrata e andare verso la parte finale della piattaforma in modo tale di essere facilitate a salire sul treno. Una volta che il treno arriva è importante prima di entrare lasciare uscire i passeggeri e questo è molto importante. Poi, una volta nel treno, eh se si trova un posto: bene. Altrimenti, è importante eh camminare verso il fondo della della del treno e vicino alle entrate e sempre benvisto lasciare il posto agli anziani o ai disabili e così uno arriva a destinazione senza troppi problemi.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim23: I thought the Italian would be easy but instead it was the hardest. I had a few moments where I couldn't find the right word in Italian. Maybe I've spent too long here! It's what I was saying before: sometimes I can't find words that should be easy to find. At the moment I find it easier finding words in English.

AM: Do you think that this kind of activity would get easier with practice?

Sim23: Yes. I'm pretty sure. I think it's just about mindset once you get used to translating back and forth. The topic has an impact but if you know the topic it would be much easier. For example, I've studied here and I've forgotten all the technical terms in Italian so when I have to speak about my topic in Italy for me it's tough. It's better if I actually talk in English.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim23: I was always anxious during the translation but towards the end I was fine. At the beginning it was a bit stressful.

## Sim24

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Sim24: I was born in Italy from an Irish mother and an Italian father. My mother was born and raised in Ireland and lived in Italy from the age of her mid-20s and she studied Italian and then married my father. When I was born she always kept English because it was a first language so she would speak to me in English and my father would speak to me in Italian as my father did not know that much English. I would obviously speak Italian in my everyday life in Italy and, for as long as I can remember, I've spoken both languages. I associate speaking English to my mum and Italian to my dad and I would never swap that: I would never speak English to my father and Italian to my mother would always be weird to me and that's how it's always been. I would feel that my languages are on the same level now as I've spent an equal amount of time living in Ireland and in Italy. I feel like languages are quite mixed together in my mind but it depends on where I am. If I'm in Ireland and I'm speaking English every day and doing things in English then I would have predominantly English in my mind but then I speak to people in Italy every day so I have the Italian there but my thoughts would mainly be in English. While I'm in Italy, since I'm speaking Italian most of the time, my thoughts would be predominantly in Italian.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Sim24: I think I'm going to be better at the Italian into English, which I've always been better at anyway. Doing translation I was always better in that direction. I would consider my Italian to be my first language, just because I was born there and it's more ingrained in me. I think things like the news I would be more used to watching them in Italy when I was a child so the news comes really easily for me to translate into English.

AM: Do you think there are any aspects that you might struggle with?

Sim24: I think multitasking and doing the numbers. Also, the thing in Italian is the vocabulary. If there's one word that comes up that shakes me that will be an obstacle so hopefully I won't run out of vocabulary.

AM: How are you feeling before you start the activity?

Sim24: I feel fine. I'm excited to see how I do! I thought it was going to be written translation so I thought you would give me something to translate directly in writing. Spoken is not as bad: I've always been better at spoken than written work.

### [Simultaneous interpreting from Italian into English occurs]

*My name is Giovanni Sallicci and I will talk about young people and social networks. It seems from research it emerges that more than half the young people that use MySpace or Facebook talk about behaviours that are at the limit of legality. These are studies by paediatricians or psychiatric doctors. Research one research took 500 people young people eight- of the age of 18. 41% said that social network ee- was used to talk about information on drugs and alcohol. In the 24% sexual behaviours, while 14% spoke mainly about violent behaviour. It was found that the young people involved in religious groups or sports speak about this less. Another study looks at 190 profiles where information was taken about risky behaviour. Researchers communicated this behaviour to the authorities and which was seen as awarding... One profiles was warned about criminal information. The the young people were t- were talked to about talking to strangers on the Internet. Most of the young people that got the email that was a warning changed their profiles, particularly eh eliminating information about alcohol and drugs and sexual behaviour. What can we take from all this? I would say that it's a situation where behaviours that are always seen in young people's social scenes found expression in social networks. From always, young people talk about eh prohibited things when they are together*

away from adults. The 'net simply creates virtual groups where these behaviours of exchanging information can be seen naturally.

### [Simultaneous interpreting from English into Italian occurs]

*Buongiorno io sono ital- inglese e ti voglio parlare del come ci si comporta nella metropolitana. So che la maggior parte di voi è stata a Londra le cose che fanno i turisti come Buckingham Palace, il Big Ben e London Bridge. Ci sono tante cose da fare a Londra ma la domanda è come ci si arriva? Londra sempre ha e stata molto costosa per le tasse e non si può andare in bicicletta perché non è molto... Quindi molte persone prendono la metropolitana. Gli inglese ah le intere interagiscono tra di loro sulla metropolitana quindi ricordatevi di queste cose semplici: arrivare alla metropolitana avere il biglietto per entrare nella barriera perché ci saranno delle persone che ti saranno dietro. Una volta passata la la barriera de- devi guardare eh che direzione devi andare quindi blu chiaro per Piccadilly. Devi sapere la direzione è il colore. Arriverai alla scala mobile e sentirai eh l'annuncio che dirà dove stare: a sinistra/a destra dove arriverai alla piattaforma e devi camminare fino in fondo. Sarà molto stressante perché ci sono ci saranno tante persone quindi sarà più facile salire sulla metropolitana se cammini fine in fondo. Mi raccomando aspetta quando si aprono le porte di aspettare la gente che esce. Ricorda- ricordarvi di aspettare la gente che esce perché può causare stress. Una volta entrati, non rimanere in piedi vicino alla porta ma entra e se trovi un un posto mi raccomando di alzarti in piedi in caso ci sia una signora incinta. And the last bit I literally had too much going on in my head so I gave up!*

### Post-Interpreting Think-Aloud Protocol

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Sim24: I thought the Italian into English was easiest. I thought I had to concentrate more for the into Italian but, at same time, the second time - even if I was doing the numbers - I still thought it was easier because I'd already heard it the first time. I recalled some things. The English into Italian was more difficult to memorise, while the other one the second time around I remembered what he was saying. I got more or less the same number of numbers in the maths for both languages.

AM: Do you think that this kind of activity would get easier with practice?

Sim24: Yes. I think even the second time around it was easier for me to do. When you were telling me earlier that I was going to listen to something and then talk the same time and translate it I thought I definitely wouldn't be able to do it. It was difficult enough for me to do translations on paper. The second time around it's much easier when you hear it: you can actually speak at the same time.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Sim24: I was excited to challenge myself. The only part that puts you off is the maths but then you realise that it doesn't distract you. I was thinking I wouldn't be able to subtract and listen to him at the same time but once you hear the first few words you kind of know and you start saying all of that and then in the split second you have left you do the subtraction and then you go back to listening. It's definitely complicated, more so if you don't know what they're about to say when they open their mouth. I think if you were watching the news and it was something on the spot it would be a lot more challenging.

## Seq1

### Pre-Interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Seq1: I took English and German for four years in secondary school in France. I chose German for the equivalent of the Leaving Certificate and that was my first foreign language, with English is my second foreign language. My level in German was better because I had more connections with Germany so it was logical for me to take German. I went to Germany regularly so my German was always much better. Then I met my husband so when I met him my level of English was Leaving Cert level then I came to Ireland and after many years I switched over. I could not speak German for many years when I developed my English proficiency but I was still going to Germany so every time I went back it would take me a little bit of time but I always go back to that high level. When I reached the same level of German and English than I was able to switch from German and English no problem. Now, if I go to Germany, it will take me one or two weeks to get back into the German structure. I have a very high level of understanding but it will take me much longer to reach the same level of fluency I had before. My English is of a higher standard than my German now. I don't feel like I have the same level in French and English. As a French teacher you work a lot through French, obviously. I need to read more, which I used to, but since I had children I haven't had time to read so now that I'm reading a lot on linguistics I found that I need to be reading a lot more, including everyday newspapers. If I read something and I don't understand a word I usually go back and try to understand. I do know that my accurate regarding the language is not up to scratch in English. Sometimes I do know what words mean but I can't translate them. My husband is also very hard on me so every time I make a mistake he corrects me in English. I think if you had asked me that question a few years ago I would have said "boxes" but over the last 12 months I've become aware that when I speak to my children I never ever mixed in languages but recently I've noticed that I do start sentences in French and finish it in English, which I don't like. So my languages are much more mixed now than they ever were before. Before I was very strict. At the same time, I'm aware of this and I don't like it and I'm trying to fight it because I don't want to use *charabia*. I think it's the influence of the children, even though they don't mix the languages any more: they start in French they usually finish in French. It's me who's mixing the two languages much more, which is not good.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq1: I think that probably listening in English and the interpretation of the speech will be my strongest part. I don't think I will be translating the text accurately. What I mean by this is that I will be trying to give a translation of the ideas and concepts that I hear, rather than words, keeping it as close as possible. However, I'm aware that this is not always possible. What I've found is that because of my memory working differently with age, the ideas don't come up as quickly so, even though I do understand in English, out of the full information I'm getting together in one minute I will only be able to give you back one or two pieces of information. I think that's just because of the structure of your brain and the way, after a certain age, the information doesn't come up as quickly as you would like it to. I'm aware of this as well and I think it's something that you have to work on in order not to lose it. I've found the same when I teach. My grandmother used to do maths at 70 years of age every day to try to keep training her brain. I haven't found a way for myself because I've been busy but I think it's very important to keep that up. I think the interpretation of what I hear in English will be my strongest point.

AM: Do you think there are any aspects that you might struggle with?

Seq1: Probably finding the accuracy of the words because of this slowing down of the brain. I'm not geriatric but I am realistic! I know when I have to give a speech French it takes time to get back into it. I know it's stupid but it is true. It's fascinating anyway!

AM: How are you feeling before you start the activity?

Seq1: I felt relaxed when I came in but I feel a bit nervous at the moment. My heart will jump up! I'm still relaxed but I feel much more tense than when I started because I now understand the task involved so I can predict the impact is going to have on my body.

**[Simultaneous interpreting from French into English occurs]**

*Good morning. I know that by euh taking euh started to speak now I target young people so I decided to speak about a topic who interest you: people Facebook. I would like to speak about euh euh Facebook in a very hard way so you could be disappointed. For the last few years Facebook euh took a very important place in the world and we euh Facebook himself euh euh called himself a socialisation média so when we go on Facebook and we get used to the idea a characteristic come out. It's not as it's euh euh not a negative characteristic. Facebook is for me more euh exhibition euh média but they euh use the mask a socialisation mask. Que fait l'homme numericus on that social network? Euh you can read you can read ideas with no sense, without any qualities behind those ideas and no intellectual qualities. Euh the prove is there is no stylistic euh writing on Facebook: we don't write on Facebook; we communicate. We think we do communicate but we don't. Euh the writing euh is on euh.. On Facebook we don't think. We say directly in a few few words without any elaboration what we think about all topics about all euh very weird topics. On Facebook t- communication killed writing and if we say that communication killed writing as well we can we could actually say that communication killed communication. Facebook's law is really that it's euh give a chance to everybody to euh speak about yourself euh, to be narcissist and e- exhibitionists. Narcissus is an interesting idea because you can it's like it's like looking at yourself in a mirror in a river. When we see the portrait of the internaut on Facebook we can only be worried about this new form of euh narcissism. It's much more like an a way to exhib- to exhibit yourself but, like reality TV, which, in reality, is euh a way to euh to... So, Facebook is only a face and it's a very sad face.*

**[Simultaneous interpreting from English into French occurs]**

*Euh bonjour. Je m'appelle et je suis en anglais et aujourd'hui je vais parler euh de de du métro de Londres. J'imagine que de nombreux personnes parmi vous ont visité Londres, euh par exemple Buckingham Palace, Big Ben, London Bridge. Il y a énormément de choses à faire et à voir à Londres, mais euh la question est comment atteindre ces endroits? Londres est une ville très euh chère so comment euh atteindre ces euh. So, euh le vélo n'est pas forcément le moyen le plus facile so le plus facile serait peut-être le euh métro. Les Anglais sont euh connus pour euh être euh excentriques so so être capable de euh voyager dans le métro est très important, savoir l'utiliser. So, la première étape c'est quand vous arrivez donc près euh d'un euh métro, ayez votre ticket prêt est euh de cette manière-là vous ne vous n'arrêtez pas la queue qui est derrière vous. Vous passez la barrière euh vérifiez bien votre euh direction, quel est votre euh euh ligne, est-ce que c'est une euh est-ce que c'est la ligne rouge, la ligne verte rouge euh et comme quelle direction est quelle ligne. Et ensuite vous arrivez donc aux escalateurs roulants. Euh vous prenez donc vous restez bien à votre droite si vous montez et votre gauche si vous descendez. Quand vous arrivez à la plateforme donc euh vous euh vous gardez un espace autour des portes d'entrée euh dans le métro. Euh ce sera plus facile d'entrer dans le métro quand vous arrivez donc quand le train arrive à la station euh laissez les personnes descendre avant de monter. C'est très important euh car euh évidemment ça peut entraîner de nombreuses euh conséquences. Donc, quand vous êtes euh dans le métro, vous pouvez éventuellement vous avez la possibilité de vous asseoir ou de rester près de la porte. Euh si vous vous asseyez donc dans une euh dans un siège prioritaire, faites en sorte qu'il y a pas quelqu'un autour de vous qui soit enceinte ou une personne âgée qui aurait la priorité. C'est très important dans le métro. Et voilà donc prenez plaisir, voyagez confortablement.*

**Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq1: I wonder if it was not easier the other way round than what I thought. It was much more an interpretative interpretation speech the second time into French and I worked on my memory I suppose as well compared to the first time. Yes, it looks like it was easier the other way round, i.e. from French into English. I think that the into English was easier. Perhaps I was more tired by the time it came to doing the numbers in the French but also many of the sentences I had to give more of an interpretation of the sense rather than a word-for-word translation.

AM: Do you think that this kind of activity would get easier with practice?

Seq1: Oh, absolutely, definitely, yes. I think you should get easier with practice. For me, what is interesting in an activity like this is that it's important to interpret, not to translate word by word and that was something I was trying to do but at the same time you have to have the accurate meanings. You don't need to have exactly the same word in French but you do need to give the same context that is being given.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq1: The nerves passed; I was cool!

## Seq2

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: Do you feel your languages are stored in a particular way in your mind and how do you access them?

Seq2: I think I would say language is stored according to the memories or activities associated to them, i.e. I first learnt to bake with my American family, so I am familiar with baking terms in English. However, math or cooking savoury is associated in my mind with French language, because I have experienced those in French. Sometimes both or I lose a sense of the technical language if I do not use it. For example, I first started Law in French but over the years have continued in English so I went from being familiar in French to English in Law. And nowadays I could even say I am more comfortable practising in English. However, I notice I dream in the language of the country I live in. Therefore, when I moved back for to France for bit, I started dreaming in French again and would even dream that people that usually only speak English to me spoke French. Therefore, I assume I store language as I go through life experiences.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq2: I think it's going to be easier for me the translating English to French. I think it's just because there's more words in French so you have the when they say something so when you're translating into English you have to find the one word that would complete a full sentence.

AM: Do you think there are any aspects that you might struggle with?

Seq2: Yeah, maybe the math.

AM: How are you feeling before you start the activity?

Seq2: I'm good. I'm not nervous!

### [Simultaneous interpreting from French into English occurs]

*Hello. I know while addresssing why I'm addressing a young population. I've decided to talk about a subject that might interest you: Facebook. I will talk about Facebook in a way in a very violent manner so you might be disappointed because these past years Facebook has taken a great importance. We have considered and Facebook itself has proclaimed itself a social network so so when we go on Facebook and we get used to its usage we we forget about a characteristic about Facebook that is not as beautiful as you might think. So he they use media socialisation for media. What is homo numericus doing on this social network? He he on this website publishes his thoughts the most the stupidest thoughts, actually. Wh-while forgetting about quality and choice of words for expressing his thoughts on this social network. And Facebook you do not write: you communicate you communicate. I mean, that's what we think happens. Writing should be based on a process of reflection and thought of. Facebook has a different promise for writing: it's about publishing directly with no elaboration or thought and publishing on topics that seem unnecessary. On Facebook, communication has killed writing and literature art and at this point we could say communication has killed communication on Facebook. Facebook enables a lot more people to be narcissic and to be exhibitionist. Narciss was a sympathic personality as he liked himself so much that he drowned hi-in a river while looking at his own reflection. This reflects the same situation about Facebook users and this should worry us because this form of uh narcissism and exhibitionism will, as uh reality TV did, create chaos. Facebook is only a face and a very sad face.*

### [Simultaneous interpreting from English into French occurs]

*Bonjour, mon nom est... Je suis anglais. Je vais vous parler du l'accident de métro à Londres. Je peux imaginer que beaucoup d'entre vous ont visité Londres pour visiter les sites touristiques de Londres euh comme Big Ben. Ya beaucoup de choses à visiter à Londres. Malheureusement, le problème c'est comment s'y rend-t-on. Londres est une ville très chère: les taxis ne sont pas*



*toujours une option. Le métro est la manière la plus sécurisée de se déplacer à Londres. C'est intéressant de voir dans le métro les interactions sociales et c'est très important de connaître les règles de ces interactions sociales. Quand vous arrivez dans la station de métro il est important de ne pas s'arrêter devant les tourniquets. Une fois passé les tourniquets, choisissez la bonne direction rapidement et restez... Selon la ligne de métro... comme Piccadilly ou Victoria Line. Ensuite, prenez les escalators et c'est très important à Londres il faut se tenir sur la droite et marcher sur la gauche le long des escalateurs. Surtout ne passe euh continuez à marcher le long de la plateforme et ne pas à l'entrée de la plateforme pour éviter que ça ne bouche l'entrée. Quand le train arrive dans la station de métro, rappelez-vous de vous reculer en pour aider les gens à sortir du métro. Une fois dans le train, trouvez un siège si et si vous ne trouvez pas de siège, surtout ne restez pas devant la porte. Si vous avez trouvé un siège à côté de la porte, euh donnez votre siège si si besoin aux personnes aux passagers prioritaires comme les femmes enceintes ou les personnes âgées. En suivant ces règles nous euh espérons que vous arriverez à à bonne destination.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq2: Yes. It was easier to add than subtract. I found the second one easier; the into French.

AM: Do you think that this kind of activity would get easier with practice?

Seq2: I don't know because I think for me what's really hard is that I would put it in the cultural context so it's really hard for me to do straight interpretation. I might just put it in the way you would say it in that language. I would take the whole idea and put it in the cultural elements.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq2: I don't think so. Maybe at a point at the end when I couldn't translate in my head so maybe I got a little nervous but not that nervous.

### Seq3

#### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, how did you come to be bilingual?

Seq3: I was actually four years and a half when I joined an English-speaking school, which was completely bilingual and on day one the expectation is that the classes will be in English, which, when you're four years old, is completely normal. I was actually asking my parents you know how did I cope with that! And they said actually you came back saying 'wow, this is great'. It was a bilingual school and most of the children were actually from non-French backgrounds. We were only three French speakers, who still are my friends actually. It wasn't English classes: it was Geography and Maths in English. I feel that French is more dominant, though, definitely. It's my mother tongue. I very very rarely speak English actually. I used to when I was working but it's now four years that I'm a stay-at-home mum so I only speak French at home, Italian with my husband and only really when I have the pleasure to meet people! Interesting people like you! My social life is in Ireland but that's less than 10% of my life so.

AM: Do you feel your languages are stored in a particular way in your mind and how do you access them?

Seq3: So, I've worked 10 years in English and with various cultural differences in my team but I've always been hearing things in English and I really feel like it's two different worlds for me; two different stores but I'm not raised bilingual; I learned it later.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq3: Well, it's a little bit out of the blue for me to be able to answer but I would imagine that the translating from English to French will be my forte. That's very challenging.

AM: Do you think there are any aspects that you might struggle with?

Seq3: Probably everything. It won't be perfect so it's probably more challenging for me to translate from French to English.

AM: How are you feeling before you start the activity?

Seq3: I'm actually a bit nervous! It's really interesting! I would love to do well, you know?

#### [Simultaneous interpreting from French into English occurs]

*Hello, good morning. I know that by eh taking the opportunity of speaking I am speaking to youth people. Therefore I have chosen the ehm topic a topic which I hope will be of interest to them, which is Facebook. I will talk about Facebook in a quite violent way I believe and you might be disappointed. Over the last years, Facebook has taken a great importance. We have considered and Facebook itself considered and described ehm itself as a social media and when we go on Facebook and get familiarised and familiarise ourselves with eh it we will discover a much less ehm ehm glowy ehm eh element. To me to me Facebook has a much uhm got lost. What does the homo numericus do on this social media? They would be publishing the most trivial thoughts the most insig-insig-insig-insignificant thoughts with with no ehm importance ehm given to the ehm eh quality of the experssion nor any kind of intellectual ehm ehm ehm elegance. We do not write on Facebook: we communicate. At least this is what is believed. Writing ehm lays eh lies on a ehm on a thinking oh that's horrible. I do consider eh, however, that it is the contrary, which is ehm ehm ehm suggested on Facebook: everybody will be sharing the most ehm unprobable eh topics. On Facebook, communication has killed the writing skills and if we say that communication has killed the written skills, communication, therefore, has also killed communication. The role on Facebook eh in my sense is that it's allows eh people more than anything else to to practise narcissisism and exhibitional. Narcissus was a quite ehm lovely person as he much loved himself he wanted to look at ehm his reflection in the water and when we can see what ehm internavts will be publishing on Facebook we can only worry about this*

*new narcissism shape, which is much more exhibitionism but unfortunately time is missing and as telly reality I would like to point out that ehm as ehm telly reality is the ehm emptiness of eh television, Facebook is only a face and a quite sad face of the internet.*

**[Simultaneous interpreting from English into French occurs]**

*Bonjour, mon nom est Peter Tube. Je suis britannique et aujourd'hui je voudrais vous parler de des bonnes manières dans le eh métro de Londres. I can je peux imaginer que vous avez récemment ou dans les précédentes années euh visite Londres et vous êtes et vous êtes rendus sur les très nombreuses euh très nombreux endroits à visiter, tel que Piccadilly eh. Londres est une eh ville extrême euh couteuse et les taxis par conséquent sont eh hors ne sont pas une possibilité. No, I'm not getting it. Maintenant, les personnes sont ah it's horribly difficult. Donc, ce qu'il faut faire en termes de bonnes manières lorsque vous arrivez dans la station de eh métro vous devrez avoir avec vous et prêt dans votre main votre euh euh billet de façon à ne pas retarder les personnes qui sont derrière vous. Une fois que vous êtes que vous avez passé le système de sécurité des barrières il vous faudra savoir vers quelle ligne vous dirigez les li-lignes rouges, vertes ou bleues euh pour eh Central Line ou la ligne de Piccadilly ou la ligne de Victoria. Vous devrez ensuite vous diriger vers les escalators et vous entendrez les annonces vous indiquer que vous devez vous [laughs] vous placer sur la droite et euh marcher sur la gauche. Assurez-vous de ne pas vous tromper, de façon à ne pas eh vous rendre impopulaire auprès des personnes derrière vous. Vous verrez qu'il y a beaucoup de personnes et euh et vous verrez qu'en arrivant sur la plateforme vous devrez vous préparer au bon endroit de euh euh du quai. C'est c'est très important de façon à ne pas euh euh provoquer de frustration ou d'incompréhension de la part des autres voyageurs. Une fois arrive dans le train, vous devrez vous asseoir ah. Assurez-vous si vous avez choisi de vous asseoir sur une eh sur un des sièges euh prioritaires pour les femmes enceintes, euh pour les personnes handicapées ou pour les personnes âgées de bien leur donner votre place de façon à ce que dès qu'ils arrivent vous ne euh euh soyez pas assis à leur place. Oh, that was terrible. Extremely difficult. I was actually listening to my voice this time, which I wasn't the last time. Everything there was extremely simple vocabulary but I struggled to make it simultaneously.*

**Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq3: Not quite, actually. I was expecting to be able to translate from English to French in probably a more fluent way in the sense that French being the language that I use I would be able to place the words in the right order without hesitating and in fact it has been the contrary. I felt more comfortable working into English. I'm not sure why. I must say I knew all the words so it's not about a vocabulary question. It might just simply be that I was actually listening to my voice in French, which wasn't the case when translating into English. I do read only in French. I got all my books back after we moved house so I read only in French after 12 years in Ireland I never had my French books with me so it's a year really that I'm completely immersed back into French. Extremely interesting.

AM: Do you think that this kind of activity would get easier with practice?

Seq3: Yes. I would think so. Definitely. Well, the second time is way easier than the first time so I'm sure that it's also getting used to the exercise for people like me unless you're a translator but definitely, yes. I can see where it's a skill which can be acquired. That was extremely interesting!

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq3: No. I didn't feel nervous while I was doing it. I was before because when you hear the instructions you want to make sure you got it right. It's more relevant with the English into French translation, where I actually missed entire sentences. I felt not adrenaline but a kind of tension.

## Seq4

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, how did you come to be bilingual?

Seq4: I was 11 when I started secondary school. I think before that I have a memory of being taken to an English play class. I haven't a clue how long that went on. When we were little, my parents used English to have conversations they wanted to keep private. I was sent to England for three weeks on an exchange at the end of my first year of secondary school so I would have gone most years throughout my secondary school, bar one, and then I had English friends all the time and when I lived as a student in Paris I had a flat so if friends turned up I would put them up and, generally speaking, my English was better than their French so we would have used English. Then, at university I wasn't studying English - I was studying Economics - but some years we had to take English modules so I did but English was never a language I studied formally. Then, I had an English boyfriend for a while and then I married another Englishman! When I first left France I spent five years in England. I met my husband in France and he taught French so our relationship was always in French. At home, I would speak to him in French and the languages at home would be both. I teach French here but I haven't for the past three years so the French I would speak would be at home. If I'm talking about things to do with work, all of that would be through English because that's what I'm reading so on some topics English is the dominant language but on others French might be. What I've noticed is for many years writing in English is that I would ask a colleague to read through mails to correct my English. I haven't done that for years. I was conscious when I first came here that I wasn't comfortable with written English but I haven't felt that way for years. I actually did some consecutive interpreting years ago with a delegation in Madagascar and it was consecutive and at one point they realised I wasn't interpreting; I was repeating the same thing in English! I don't know how interpreters do it for 30 minutes!

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq4: Based on the warm-up I would say I'll find it easier to interpret into French than into English. I think it also depends on the speed at which the speaker delivers the speech. That obviously makes a difference. And I think obviously the topic will make a difference. So, I don't know!

AM: Do you think there are any aspects that you might struggle with?

Seq4: I think the split attention test is going to be a challenge! It's partly doing mental arithmetic. Yes, deduct three is fairly easy, supposedly. Doing that whilst listening? I think I'll find that a challenge. I can see the having to do the mathematics as a challenge and I kind of also wonder whether age comes into it; whether younger people find it easier. It also depends on the topic. I think it's also through which language people have been schooled. I know - talking of my own son - his son's general French conversation is fine if you put him with a bunch of French 25-year-olds, some of them won't notice that he's not really a French native speaker. I think if you bring the language level to a higher level he would struggle.

AM: How are you feeling before you start the activity?

Seq4: Interested, definitely. A bit apprehensive about the one with the maths. It's a challenge. I mean, even doing the trial. It is challenging if you've no practice in doing it but I quite enjoy doing it at the same time, you know? It's a challenge and I did lose track at times but I kept going. I know I skipped a few bits and pieces of information. It's a challenge but I find it interesting. I'm a language teacher and I do have an interest in Second Language Acquisition and I constantly move between the two languages so obviously it's interesting in that sense.

**[Simultaneous interpreting from French into English occurs]**

Good morning. I know that in ta-taking starting to speak here I speak to young people so I decided I was going to talk to them about a topic that they would find interesting: Facebook. I will speak of Facebook in a violent, challenging way so you might be disappointed because these last few years Facebook has taken an extraordinary importance. We have considered - and Facebook uh declared itself a social media or a media for socialisation eh but when we go to on Facebook and you get familiar with it it brings forward a characteristic a less eh glowing characteristic. Facebook for me is much more a media of exhibitionism which hides under the mask of socialisation. What does homo numericus do on this social network? It he or she publishes its thoughts its most trivial thoughts, the most insignificant ideas, without worrying about quality either in the way you express them or the any intellectual quality any concern for intell quality. The kind of stylistic erm is totally absent from Facebook: we don't write on Facebook; we communicate or at least this is what we believe. Writing uh is based on the task of elaboration, of thinking, but for the social network that is Facebook it is the opposite that is uh recommended: you have to say directly in a very few words without elaborating what you think on the most unbelievable subjects. On Facebook, I would say communication killed writing and if we say that communication killed writing we also say it killed that communication also killed communication. The Facebook law for me is really erm that it allows more it allows people to practise narcissism and exhibitionism. Narcissus eh was quite sympathetic because as he liked himself he loved himself he went to the side of the river to look at himself in the water and see his portrait in water. When we see the portraits that uhm people using the net eh we can only be worried. This new form of narcissism is much more a form of exhibitionism but as time is uh running out I will only say that just like reality TV, which is really the abyss in terms of communication, Facebook, sadly, is only a face and a sad face.

**[Simultaneous interpreting from English into French occurs]**

*Bonjour, je m'appelle Peter Hughes. Je je suis britannique et aujourd'hui je vais vous parler de euh de l'étiquette du Tube, le métro de Londres. Je j'imagine que beaucoup d'entre vous ont visité Londres pour aller voir tous les sites touristiques de Londres, comme euh Buckingham Palace, Big Ben, London Bridge. Il y a beaucoup de choses à voir à faire à Londres, mais euh la question c'est de savoir comment vous allez aller à ces endroits et Londres est aussi très cher et les taxis sont probablement hors de question et le vélo euh beh le vélo n'est pas vraiment comme un méthode sur pour se déplacer dans Londres donc les gens prennent le métro. Euh les britanniques sont connus pour leur euh leur politesse particulière et lorsque comment naviguer le système du métro est particulièrement important. Euh aujourd'... quand vous arrivez euh a la station de métro, euh que votre euh assurez-vous d'avoir votre billet votre ticket prêt pour passer le contrôle le composteur parce-que sinon les gens vont faire la queue derrière vous. Une fois que vous avez passé la barrière euh choisissez la direction quelle ligne. Est-ce que vous voulez la Central Line rouge ou la bleu foncée pour Piccadilly ou bleu claire pour Victoria. Choisissez bien quelle couleur et quelle direction. Ah ensuite vous arrivez à l'escalier roulant et vous allez vous devez euh rester debout à droite et marcher sur la gauche et respectez ça sinon vous serez populaire. Euh quand vous arriverez sur le quai, euh faites bien prenez bien garde de vous déplacer le long du quai sinon si tout le monde se rassemble à l'entrée euh et si vous vous déplacez le long du quai vous rent-rentrez plus facilement dans le métro. Quand le train arrive euh sur le quai, restez en arrière pour laisser les gens sortir parce-que sinon ça va créer beaucoup de frustration et de tension entre les passagers. Une fois que vous êtes dans le wagon vous pouvez vous asseoir si vous trouvez un siège. Sinon restez-vous euh assurez-vous de vous déplacer vers l'intérieur du wagon et pas rester devant la porte. Pense les seat prioritaires sont près de la porte et donnez votre siège a quelqu'un qui en a besoin: une femme enceinte, les personnes âgées, etc. C'est aussi une règle sociale qui est euh appliquée pendant que les gens travaillent les gens voyagent en métro. Et euh je vous souhaite un bon voyage.*

**Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq4: Well, I mean I clearly found it easier to do the distraction task whilst interpreting into English than into French and that surprises me. I don't know if it's to do with the language because I would have anticipated otherwise. Now, I think he speaks faster and the content..it's not a difficulty understanding the content. That's not an issue. Maybe it's more difficult to process - contrary to expectations that you should normally translate into native language - that maybe, in fact, the processing works easier if you're processing your native language and then producing the other language. This might in fact be easier than processing it the other way. It's difficult to

know whether it's the maths. I think the fact that I got stuck there when normally 197-6 shouldn't be ... but I couldn't do it whilst processing the English. I kept the interpreting going. I'm intrigued by that and what it means.

AM: Do you think that this kind of activity would get easier with practice?

Seq4: Yes. I would say so. I know interpreters are trained and there's an assumption in the world that once you speak both languages you can act as a translator or an interpreter. I think people don't necessarily realise what's at stake but yes I would say that training - be it practice or learning tricks - is very important.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq4: I think when I realised there that I was losing it I think I felt a bit yeah stressed! But not overwhelmingly so, no.

## Seq5

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq5: Just from that I felt more comfortable translating into French. I don't know why. I'm completely surprised by that. I think it's something to do with accents and trying to tune your ear in very quickly to somebody blathering away in French is hard. You understand the English and it's very easy to miss things in French and even if you can't find the word I suppose you can find ways around it so you get the general impression. It's probably easier to be more accurate from translating from French into English but you get more of a general idea.

AM: Do you think there are any aspects that you might struggle with?

Seq5: Definitely the maths. Split attention will be hard. Remembering verbs? Things like numbers? I find I get quite distracted as well.

AM: How are you feeling before you start the activity?

Seq5: A bit giddy! I had three chocolates before I came in! After a day's work it's about trying to tune in. I always find when I ring my French friend that it's just really hard going getting back into it. I know if I went back to France for a week I'd be fine: it comes back to you but maybe not at the rate you need it to come back to me!

#### [Simultaneous interpreting from French into English occurs]

*Hello. I'm speaking to young people. I just I decided to speak to them to about a subject that would interest them be important to them: Facebook. I'm speaking about Facebook as it's quite dangerous. You might be disappointed. Ehm it's become very very important significant today. It's social media is very significant. It brings out a very negative something. It sh-shows off but goes under the auspices of being sociable. One prints their most silly thoughts without thinking without thinking about what they're writing ehm without thinking of their significance. We don't write on Facebook: we communicate. We don't.. We think sss we we basically say ehm in a few words we OK it's killed communication. It's killed off writing 'cause we're only saying in a few words what needs to be said. The law of Facebook has allows childr- young children to be narcissistic and to eh indulge in ex-exhibitionism. OK like so Narcissus who went to the river to look at his own reflection, we like to put our [laughs] faces up on Facebook. It's a modern form of narcissism and a modern form of exhibitionism. I'd like to tell you like to like reality TV, Facbook is unfortunately a sad thing [laughs].*

#### [Simultaneous interpreting from English into French occurs]

*Bonjour, je m'appelle Peter Hughes. Je suis britannique euh. Je veux aujourd'hui je vais vous parler de l'étiquette à Londres. J'imagine qu'il y a beaucoup d'entre vous qui ont visité Londres euh ces derniers moments des sites touristiques comme Big Ben, London Bridge. Il y a beaucoup de choses à voir et à faire à Londres, mais la question c'est comment aller euh vers ces endroits. Les taxis sont très chers, le cyclisme n'est pas c'est un peu dangereux alors le meilleur euh façon de voyager c'est le métro, le Tube. Les anglais sont connus par leur attributs bizarres, leur leur politesse alors il faut savoir comment naviguer le système. C'est très important. Alors, ce qu'il faut faire c'est de suivre des ces choses. Il faut avoir votre billet pour mettre euh dans les machines parce-que y'aura beaucoup de gens et euh ils vont vous suivre directe alors il faut entrer par les machines. Après, il faut choisir la ligne correcte le ligne Piccadilly, ligne Central, ligne Victoria, voir quelle direction vous allez. Alors, après il y a les escalators? [laughs] euh il faut être à droite pour descendre et quand vous descendez il faut eh il faut aller tout au long du plafond il faut aller. Ça sera plus facile monter dans le métro quand il arrive si vous êtes au fond du pla-plafond. Alors, quand le train arrive c'est très très important de laisser descendre les gens avant de monter dans le train. C'est c'est très très important car il y a beaucoup de monde. Quand vous montez euh il vous pouvez choisir un siège. S'il y a pas de place, il faut euh aller*

*tout au long du du métro. Euh vérifiez que vous donnez votre siège a quelqu'un qui en a besoin, par exemple: un un handicapé, un un homme un homme euh [laughs] une personne enceinte! Et après euh si vous suivez ces choses vous pourriez euh euh avoir plaisir dans le reste de votre voyage.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq5: No, I think in some ways I expected because normally don't you interpret into your native language? Like, often, so I'd expected that to be easier and it probably wasn't necessarily. I think the practice one was definitely easier into French and I was a bit more balanced between the two but I don't think I was very good at either! It's like the little words in the one about the Tube and the speed. When I did the practice ones I would've expected the into English to be much easier and it wasn't: it was much harder but that could've been because the first one that I did. Because you've heard it already and you know what's coming the maths wasn't too bad but I found the second time around I think I probably got a few more phrases in there in English - I heard them - but this time [into French] I found that I didn't know any more than the first time and I got lost in the same places.

AM: Do you think that this kind of activity would get easier with practice?

Seq5: Definitely! Oh, yeah. Maybe I'm wrong! Maybe it's always that hard! No offence or anything. Definitely not ridiculing your choice of career! I imagine if you do it all the time and you know all the specialised vocabulary it gets easier.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq5: I quite enjoyed it! It was OK! I survived it. I don't think I've collapsed! I don't think my blood pressure has gone through the roof.



## Seq6

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: Do you feel your languages are stored in a particular way in your mind and how do you access them?

Seq6: I used to experience the storage of both French and English as accessible by a flick of a context switch. For over ten years now I only get to France maybe once a year for a week. I quickly start using my French a lot at such times (typically teaching intensively), with the context switch making my French quickly accessible and on the front shelves of my brain. However, over time (and with age?) I do find I'm slower at locating all the resources - as if there's more of a warm-up time.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq6: I think I will probably be relying on trying to summarise and get the core of what is being said, at least at that speed as it can be difficult to keep up so I'm wanting to convey the main things being described. I guess I would be trying to get it as exact as possible, make sure that I use the same kind of register in the other language, which might or might not happen. My facility in the two languages wouldn't overlap exactly so my ability to interpret will depend on how close the content is to my experience.

AM: Do you think there are any aspects that you might struggle with?

Seq6: Possibly if the person is not being very precise. Some people who talk talk around and don't actually get to the point quickly and I find it difficult to waffle in the other language in order to cover the waffle so if it's precise I would prefer that!

AM: How are you feeling before you start the activity?

Seq6: I'm just interested in being involved!

### [Simultaneous interpreting from French into English occurs]

*Hello. I know that by speaking here I am speaking to young people and for that reason I've decided to speak on a subject which might be of interest to them, which is Facebook. I'm going to speak of Facebook in such a way as to be perhaps violent and you might not like what I have to say and that's because these last few years Facebook has become extremely important. It's been considered by Facebook itself as a média de socialisation - a socialising instrument - but when you go onto Facebook and eh discover what's involved what you see is a a much less eh pleasant kind of characteristic. As far as I can see, Facebook is much more about exhibitionism, which hides itself under the mask of a socialising instrument. What does eh the numerical person or the the eh computer person think socially? He puts his eh most trivial thought out in ou-ou out there onto the social media and has no concern at all for it to be of any quality, either in the content or the means which is used to explain it, including intellectual means. In fact, the whole business of a stylistic criterion is not there on Facebook. You don't write: you communicate or at least eh so they say. As for writing, you have to elaborate it; you have to think but my impression is that for a a social medium like eh Facebook it's the opposite of this which matters. You just eh open your mouth and have a few words and you don't elaborate on anything and eh the subjects in-in-involved are the most unreasonable you could imagine. On Facebook, communication has killed writing and i-if it is said that communication has killed writing then communication has killed communication. The law of Facebook as far as I can see is in truth that it allows more people to carry that out. Narcissus is the the nicer version: Narcissus liked himself so much that he went to a river and looked in the river and saw his portrait in in the water but when you see what those who are on the internet eh show of portraits you have to be worried. This new form of narcissism is much more exhibitionist and as I've no time left I'm going to have to say: just as telly reality on your TV is eh a kind of eh empty hole as regards*

communication, Facebook, unfortunately, is just a face and eh eh a very sad face of the same reality.

### [Simultaneous interpreting from English into French occurs]

*Bonjour, je m'appelle Peter Hughes, je suis britannique et aujourd'hui je vous parlerai de comment se comporter dans le métro londonien. J'imagine que pour beaucoup d'entre vous vous avez visité Londres ces dernières années et vu euh les sites touristiques comme le Palais de Buckingham, comme le Big Ben, comme le euh pont de Londres. Ya beaucoup de choses à faire et à voir à Londres, mais alors comment s'y rendre parce-que Londres est très couteux comme ville? On ne prendra pas de taxi dans ces conditions-là. Alors, il faut chercher le moyen le plus sûr de de faire le tour de la de la ville et ça c'est le métro ou le underground, comme nous on l'appelle. Il faut connaître les interactions de type social euh qui euh ont lieu dans ce système. C'est très important. Alors, il faut savoir quelles sont les étapes au moment d'arriver. Euh avant d'être devant la barrière il faut avoir son ticket et euh ne pas euh poser de problèmes pour les gens qui euh sont derrière vous, choisir la bonne euh direction, suivre les indications pour la ligne qu'il qu'il faut se choisir, savoir quelle est la couleur qui correspond à la ligne que vous cherchez. Ensuite, vous serez devant l'escalateur et il faut garder euh la ligne à à gauche puisque si vous faites le contraire vous ne serez pas très populaire pour les gens qui sont là. Beaucoup de gens sont à à l'entrée chaque fois et euh ça ça met le stress pour euh tout le monde. Il est beaucoup plus facile euh d'être euh bien installé sur la plateforme pour que le ça ça frustre beaucoup les gens si on ne respecte pas la consigne. Si vous trouvez un un siège pour vous asseoir c'est c'est bien, mais sinon, poursuivez un peu plus loin pour ne pas rester devant la porte. Si vous avez choisi un siège euh prioritaire, alors si quelqu'un qui correspond aux critères devait arriver, il faut euh laisser sa place à cette personne. Ça c'est très important socialement parlant et si tout se passe bien, vous arriverez sans euh sans encombre euh à votre destination et vous aurez passé un un un bon séjour.*

### Post-Interpreting Think-Aloud Protocol

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq6: Yes, I think so. I probably haven't had to do interpreting of every day general subjects that I wouldn't have chosen myself so that's interesting: having to talk about something that is kind of imposed in that sense. There were bits where it seemed much easier with the maths and bits where I was noticing some things that I hadn't perhaps translated as precisely the first time. I probably also missed some, however, for that reason. I felt I did better in some parts and not so well in others! I found doing the maths into French more difficult and I'm not sure whether that was linguistic or not. That's a good question. He was a little faster in English than the French guy so that made the concentration...the need to stay well connected with the speech.. it felt more demanding overall but I wouldn't say that it was just the language.

AM: Do you think that this kind of activity would get easier with practice?

Seq6: I find it difficult to answer that question because I've done limited interpreting over a period of quite a number of years and, because it was only an annual thing, I'd say it probably did get easier after the first couple of ones: I realised what the job actually was. It wasn't half an hour at a time; it was three hours at a time and then a break so you have to go about it a different way. But, I also wasn't being required to do technical interpreting but rather quite often to summarise what was being said because often a lot of waffle was spoken at the microphone, which I had to let pass and say 'OK, I'll tell you what this is about in a moment once he's decided what he wants to say!'

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq6: No, I don't think so. I think once I'd adjusted to it I was happy enough.

## Seq7

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq7: Well, on the basis of what I did there, I did better on English to French, maybe because of the volume. I don't know. I would expect to be better on French into English because I'm going into my own language. On the basis of that, I did better the other way around; I don't know why. I didn't have fear of not understanding but I understood the French; I just couldn't hear it all.

AM: Do you think there are any aspects that you might struggle with?

Seq7: Just the simultaneous nature of it, I think. I think the split attention will throw me completely. I can listen to French radio and do all sorts of things in the background but listen to French radio, talk English and do things...I don't know. Maybe I'll surprise myself!

AM: How are you feeling before you start the activity?

Seq7: Fine. A little bit anxious now about the French into English one but it'll be different because it's somebody doing a speech.

#### [Simultaneous interpreting from French into English occurs]

*Hello. I know that in speaking here I'm addressing myself to young people and so I've s-decided to speak about something which might interest them: Facebook. I will speak about Facebook in eh eh a fairly abrupt way, I think. Maybe you might be disappointed because in the fast past number of years Facebook has taken on an extraordinary importance. We have considered that Facebook spoke itself eh calls itself a socialisation medium. Well, when you go on Facebook and you become familiar with it eh what comes out of it is a much less edifying characteristic. Facebook for me is much more eh an exhibitionist media which is hidden under the or hides itself under the mask of socialisation. What does homo numericus do on this social medium, this social network? The most trivial eh the th-most trivial thoughts, most significant insignificant ideas, without worrying about the slightest quality in the way of expressing them or in the slightest eh intellectual value. Eh eh anyway, the eh stylistic requirement is completely absent. You don't write on Facebook: you communicate. At least you think you are. Writing eh writing eh requires eh an amount of reflection and elaboration. It is the exact opposite on eh which is preached on Facebook: you say what you think in a few words without elaborating eh what you like on all sorts of ridiculous subjects. On Facebook I was going to say communication has killed writing and if you say that communication has killed writing you're also saying that eh that communication has killed communication. Eh for me, the law Facebook is really that it allows much more people much more to be narcissistic and exhibitionistic. Narcissus went to the edge of the river to look at himself in the reflection in the water. When you see the sort of portraits that eh people using the internet put up on Facebook or y-you have to worry. This new form of narcissism is much more a form of exhibitionism but I I will say quite simply that as as eh reality TV is the exact zero, Facebook is just a face and it's a sad face at that. Thank you.*

#### [Simultaneous interpreting from English into French occurs]

*Bonjour. Je m'appelle blabla, je suis britannique. Aujourd'hui, euh je vais vous parler de l'étiquette à bord du du souterrain euh à Londres. Je pense que ceux qui ont visité Londres pendant le dernières années et qui ont qui ont visité les sites euh à euh Londres tel Big Ben, Buckingham Palace, le London Bridge. Il y a tellement de choses à voir, mais la question c'est comment s'y rendre Londres est aussi connu pour être une ville très chère; les taxis sont hors de question et le cyclisme n'est pas considéré comme euh un moyen sur. Beaucoup de gens prennent le souterrain. Les britiques sont connus pour leur euh politesse un peu différente euh on voit ça euh dans le souterrain euh et leur façon de naviguer le système est très important. Ce qu'il faut faire c'est quand vous arrivez à à à la station de métro, il faut avoir le votre ticket prêt à la barrière parce que les gens euh sont très pressé et vous voulez pas créer une queue derrière*

*vous. Vous voulez franchir la barrière dans la bonne direction euh euh savoir quelle ligne il faut prendre: le rouge ou le la Central ou la bleu pale. Il faut connaître il faut savoir quelle quelle couleur vous voulez. Puis, vous allez arriver euh à l'escalier roulant. C'est très important vous vous il faut se tenir sur la droite pour que les gens marchent à gauche. Une fois arrivé sur le quai, euh il faut vous avancer un petit peu parce que les gens ont tendance à se regrouper près de l'entrée euh et ça euh peu stressé beaucoup de gens. Si vous vous allez plus loin si vous longez le la le quai ça peut vous allez plus facilement trouver une place. Alors, quand le train arrive, il faut absolument se tenir un peu à l'écart pour laisser descendre les gens. C'est ça cause beaucoup de frustration et de tension entre les gens. Une fois dans le le compartiment, euh ne vous tenez pas près de la de l'entrée euh euh vous euh si vous vous asseyez dans les places prioritaires euh veillez à ce que vous cédiez votre place a des gens comme par exemple une femme euh enceinte. C'est vraiment euh une euh une des lois sociales de de du Tube du souterrain.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq7: I think so, yeah, I think so. I was expecting that it would be easier into English and I did find it easier into English. The split attention test going into French was a struggle for me: I just lost my concentration at one point and I think I missed things and decided to pick up where I was, rather than go back and miss the next bit. I generally work and converse in English at the moment but I'm very comfortable in French. I do get taken for French and I'm just back from France and several people thought I was French. I am more comfortable in English. I wouldn't say I'm bilingual; I would have thought if I was bilingual I would have done that better. I wouldn't say I'm bilingual in the sense that you're always learning your own language as well but I am constantly learning new stuff in French.

AM: Do you think that this kind of activity would get easier with practice?

Seq7: Oh yes. Oh God, yes! Well, I think so, yeah. It definitely would get easier. It makes me understand a lot how difficult it is for students trying to understand and get the listening comprehensions in French!

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq7: The nerves passed. At least I think they did once you get into it. I'm slightly annoyed with myself because there were things I was understanding but I knew I wasn't saying.

## Seq8

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Seq8: I feel like it's a mish-mash; a mixture in my head. They just all there. I also speak Spanish and a bit of Irish but they are not usually strong enough. It would only be if I had been speaking Spanish recently. French is dominant in that sense.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq8: I'm good at maths I'm logical so that doesn't bother me but it's hard to tell. In the practice I didn't have the words in French but I knew I was making false friends as I was translating into English so I don't know which is better like I said 'embarcation' and I don't think that's a word in English so I suppose into English is easier in a sense. I started learning French when I was 12 and I learned French until I was 22. Then I lived in France after for eight and half months. In my mind I'm dominant in English.

AM: Do you think there are any aspects that you might struggle with?

Seq8: I think I might not catch all the words in French. I might miss a bit. If there's one clause and I miss it and that means I miss the next clause then there be a knock-on effect.

AM: How are you feeling before you start the activity?

Seq8: A little bit nervous. I'm interested.

### [Simultaneous interpreting from French into English occurs]

*Hello. I know that sitting here I'm talking to young people so I've decided to talk about a subject that might uh interest them: Facebook. I'm i'm going to talk about Facebook in a in a f-fairlyyyy aggressive manner so you may to be be disappointed. In recent years Facebook has taken on aaa extraordinaryyyy life. Facebook is a a self-called social media but then when we go on Facebook and we familiarise ourselves with it... but we see a characteristic a lot more reducing. For me, Facebook is a l- lot more so so a exhibition media sh- bu- hidden behind a mask of sociali- social media. What's on this social media network? Trivial ideas; the most insignificant... the way of expressing them nor is there intellectual quality. Stylistic demands are completely gon- not on Facebook. We think that we communicate at least. Writing is a a work that that requires a lot of thinking but on Facebook it's the contrary: you just have to say straight away in very few words, without elaborating what we think about various subjects. On Facebook commu- communication has killed writing and if communication has killed writing then communication has kill- killed communication. The law of Facebook is truly that which allows a lot of people to be narcissitic and exhibitionism-nist. Narciss-us loved himself so much that he went to see his ehm face in the water. When we see the portraits that Internet users put on Facebook we can we can surely be worried. It's eh it's a new form of exhibitionism but just just like reality TV, unfortunately, Facebook isn't anything but a face and nothing but a face.*

### [Simultaneous interpreting from English into French occurs]

*Bonjour, je m'appelle Peter Hughes et je suis britannique et aujourd'hui je vais vous parler de le l'étiquette sur le le tube en Londres...le métro...Londres. J'imagine bien que quelques-uns d'entre vous ont visité Londres ces derniers années pour voir tous les sites touristiques comme Big Ben, le Pal-Palais de Buckingham, et cetera, mais le question c'est comment y aller. On sait très bien que Londres c'est une ville euh pas euh enfin euh assez chère et les taxis sont chers...le le faire du cy-cyclisme c'est dangereux donc beaucoup de gens pren le métro. On voit pleins deee différentes façons de de en traiter entre les gens sur le Tube et il y a une certaine étiquette aussi donc dès l'arrivée faut avoir le billet prête à passer par les barrières donc donc n'oubliez pas d'avoir le le billet prêt et donc et après avoir passé pour la barrière il faut euh voir la ligne qu'on*

*veut prendre, si on veut prendre le la ligne bleue claire pour Victoria ou bien leee rouge pour Piccadilly. Après il y a les les les escaliers roulants. Il faut se mettre bien à gauche et sur la quai il faut il faut bien euh pas pas fa- avoir une foule donc il faut s'étaler sur le quai et c'est beaucoup plus facile de d'entrer dans le tube dès l'arrivée de le de du métro. N'oubliez pas de laisser les gens sortir du métro avant d'y entrer. Sinon, il euh peut y avoir beaucoup de frustration et tension entre les gens euh...le public et si vous ne trouvez pas de de chaise, euh n'oubliez pas de marcher euh et ne pas rester à côté des des portes. Si vous avez une une chaise euh près de la porte n'oubliez pas de laisser euh une dame qui qui est enceinte ou bien une une personne âgée euh sentir là et après vous pouvez disfruter de votre voyage.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq8: It was maybe a little easier than I expected but I found it a little bit more stressful perhaps as well. I perhaps thought it was easier into English but I maybe did better into French, I'm not sure. But then my French didn't match, especially the second time into French it was more informal what he was doing and it wasn't very good French. It was maybe easier into French. Sentence structure or something like that. It was easier. The maths unsettled me a little bit the second time around but that was also into French and the final test so I was tired.

AM: Do you think that this kind of activity would get easier with practice?

Seq8: Yes but you'd also have to be practising your languages and keeping up your vocabulary.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq8: I definitely got more stressed but it was very interesting to see how it went and my lack of words! It shows me up at my French but it's still interesting.

## Seq9

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq9: I would say it's easier to translate from English to Spanish because I don't need to think that much. It's always easier to understand than to talk. I wouldn't say the numbers will help me; it's like another distraction.

AM: Do you think there are any aspects that you might struggle with?

Seq9: Keeping up with the speed. It's not that easy to follow and manage to say everything.

AM: How are you feeling before you start the activity?

Seq9: I feel okay. I'm not nervous.

### [Simultaneous interpreting from Spanish into English occurs]

*Good morning. So, I'm talking to you about something that is really popular in a few cities. I'm talking about running. So, if you want now, I can start talking. Do you realise about what is going on on the cities? You see a lot of people that is running and I'm not talking about just they are running because they are late or they're in a rush just because they are just doing footing. And now it is m- more of them call as running. So, this is people that is running for pleasure or to do some sport. Now times I've ask myself about why this is a success and a lot of peoples when I ask them about this they are saying that's an activity you can do at at any time so it's compatible with a professional life or with your family life. You can go out running whenever you want and whenever you can and it is cheap: all you need is are runners. But then you can spend so much money buying t-shirts, Ipads, everything. And finally I will tell you two things: you could go out running just on your own or you can go to a club where a where a trainer can teach you how to run; how to improve your goals. I would recommend you to do it because it can be addictive. And don't tell me I didn't advise you.*

### [Simultaneous interpreting from English into Spanish occurs]

*Hola, soy Peter something and ehm voy a empezar con mi discurso ahora. Puedo imaginar que muchos de vosotros habéis vi- habéis visitado Londres, lugares como Buckingham Palace, eh London Bridge. Hay muchas cosas que ver en Londres. Sin embargo, es cómo puedes llegar a estos lugares? Es una ciudad muy grande, los taxis pueden estar fuera de posibilidades y además puede ser no seguro. Entonces, mucha gente coge el metro. La gente de Londres es conocida como no ser muy buen muy buen educada. Entonces, lo que necesitas hacer es seguir estos pasos: llegar a la estación de tren de metro y estar seguro de que si vas a coger la red roja o la red al azul desde Victoria. So, entonces necesitas saber... tienes que buscar las escaleras y tienes que estar en la derecha y caminar a la izquierda. So si caminas hacia abajo va a ser más fácil caminar dentro del metro. Esto es muy importante porque puede causar mucha frustración y atención en la gente. Si te sientas en un sitio con prioridad va a ser un sitio al lado de la puerta y ten cuidado no le estés quitando el sitio a una persona que puede ser que lo necesite pero esto es más bien una regulación social y puedes d- disfrutar el resto de tu viaje.*

### Post-Interpreting Think-Aloud Protocol

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq9: No! It's been totally the opposite! Spanish to English was easier than English to Spanish. I suppose it's because I'm living here at the moment can be easy; just that is what I'm doing. The maths made it more difficult. It's another thing you need to think of you are doing the translation.

AM: Do you think that this kind of activity would get easier with practice?

Seq9: Yes, definitely.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq9: I felt kind of stressed because you cannot manage to do everything. You cannot translate absolutely everything.



## Seq10

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq10: I think the maths will distract me and I think it's going to be easier for me to translate from English to Spanish because when I'm translating into English I have to look for the words more and when I'm translating into Spanish the words come more easily. My dominant language is Spanish but I'm working all the time in English. When I'm talking about my work I prefer talking in English because that's the language you use when working.

AM: Do you think there are any aspects that you might struggle with?

Seq10: Doing everything at the same time.

AM: How are you feeling before you start the activity?

Seq10: I'm curious about how I will deal with everything. I don't feel nervous.

#### [Simultaneous interpreting from Spanish into English occurs]

*Good morning. I'm gonna talk about an activity which is very popular. We are talking about making footing in Spanish but it's jogging, which is run. If you look at what's going on in the cities in the streets you can see people running and it's not running because they are late or anything or they are in a rush but because they're doing jogging, which in Spain is called as running, and this these people running because they find it nice and a certain sport. It's big success and I wonder why. I've talked to many people and I'm gonna s- talk about some of the reasons they've told about. First, because the flexibility: you can do it at any moment and, therefore, it's you can work and run and you can have your family and run. You can go running when you can and where you can. It's cheap: in theory, just need the trainers but if you go farther in the subject you can spend a lot of money in t-shirts, trainers and equipment. You can do two things: you can go out running whenever you want, wherever you want or you can take part in a club, where a professional teach you how to run and run better. I don't know if I convinced you that I I told you to to try it 'cause everyone says that its hook so..*

#### [Simultaneous interpreting from English into Spanish occurs]

*Hola. Vamos a hablar sobre el el ticket del metro de Londres. Imagino que muchos de vosotros han visitado Londres en los últimos años y, por ejemplo, el Buckingham Palace, Big Ben, London Bridge. Hay muchas cosas que hacer y ver en Londres. Sin embargo, no sabemos cómo llegar a estos sitios. Londres es una ciudad muy cara por lo que los taxis son muy caros por lo que los taxis no es una posibilidad. La bicicleta tampoco es una posibilidad eh por eso mucha gente coge el metro pero a veces puede ser nn- no educado o demasiado excéntrico. Necesitamos reconocer los siguientes pasos: cuando llegas al metro ten tu ticket preparado. Una vez que atravesas la barrera asegúrate que vas en la dirección correcta si quieres ir a Victoria o Piccadilly o [unintelligible] qué color quieres coger y en qué dirección vas. Una vez que una vez que vas en la plataforma necesitas seguir caminando porque a veces la gente se bloquea mucho. Cuando la gente va a salir del metro tienes que mantenerte a un a un lado y dejar la gente salir. Una vez que estas en el metro puedes sentarte o estar de pie pero no te quedes en la puerta. Si estás en en el asiento de prioridad asegúrate que se lo dejas a cualquier una persona que lo necesita como personas embarazadas o personas mayores. Seguramente llegarás a tu destinaci- a tu destino y podrás ehm disfrutar tu viaje.*

### Post-Interpreting Think-Aloud Protocol

M: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq10: I think it was going to be easier than it actually is. It was hard, especially when you're doing different things at the same time. I think all my maths are wrong! I think I found it easier working into English. I don't know if it was because of the subject or because I know more about jogging. The first time around I was frustrated because I lost a word and then I felt like I'd lost everything. The second time I know already what was going on so I gave more information.

AM: Do you think that this kind of activity would get easier with practice?

Seq10: Yeah, sure.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq10: I didn't feel stressed because I know it's not very important but I was trying to do things and thinking that this is much harder than I thought.

## Seq11

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq11: I feel I will be more comfortable listening to Spanish and saying it in English. I haven't spoken Spanish in a while so my vocabulary isn't on point but it's easier for me to listen and then say it. Out of all of the categories of language, speaking was always my worst. I could write very well, I could read very well I could even listen better than I could speak. Also, I can put my own spin on it and I can elaborate more in my native language.

AM: Do you think there are any aspects that you might struggle with?

Seq11: The problem is with me speaking at the same time that they are speaking. I get nervous that I'm not gonna hear something that they are saying while I'm saying it. Time management would be an issue for me. It's a thinking process: I'm trying to think about what they're saying and then I miss what they're saying.

AM: How are you feeling before you start the activity?

Seq11: I need to practise Spanish! I'm the only person in my family to speak Spanish at home and none of my friends speak Spanish. I did it as a career choice to speak Spanish so I don't have much knowledge in world vocabulary. I wouldn't know how to say certain things if they don't come up in a classroom setting, especially if they're words that don't get used very often. I don't really feel nervous. I feel overwhelmed! Not a bad way; I'm not gonna crack!

#### [Simultaneous interpreting from Spanish into English occurs]

*Good morning. We're gonna talk about activity that's very popular in the United States. We're gonna talk about jogging, which is a colloquial term. We're gonna talk about it at the beginning of this course. We're gonna talk about a phenomenon on that's popular. We're talking about running throughout the city and things like that. The younger generation goes jogging. It's a little bit different than running and people do it for enjoyment or pleasure... for a sport. Many people many people enjoy re- going doing it a lot. You can do it whenever you like; it's easy to facil- facil- facilitate. You can leave or stop whenever you like. It's a cheap sport so you can spend as much time as you like on it. People spend a lot of money on I guess equipment. There's two things: you're very free after where you're running. You could join a club and you could start running with people uhm and it's a fun, easy sport. Good luck.*

#### [Simultaneous interpreting from English into Spanish occurs]

*Hola, me llamo Peter Hughes uhm hoy yo hablo sobre uhm. Yo puedo imaginar uh que la gente visitar a Londres. Hay muchas cosas para ver y hacer en la ciudad. Uh ci- bicicleta? Cycling? Uh el Tube es el tren. Uhm hay muchas situ- uh hay muchas situaciones sociales en el tren y cuando tú llegas uh en el tren uh uh tengo tienes el billete y tienes que uh. OK. Cuando tu llegas en el tren hay muchas gentes y t- tienes que saber dónde tú vas y es muy importante para saber uhm el sillo especial. Hay muchas reglas para... Gracias. [Laughs] Jesus!*

### Post-Interpreting Think-Aloud Protocol

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq11: Actually, the opposite: I thought translating into English would be easier but it happened that the train situation - speaking in Spanish - seemed to be easier. It was probably because I'm a native speaker so I'm used to people talking a lot but selective hearing. When I'm listening to Spanish I'm concentrating on it. When he's speaking I can catch what he's saying, even afterwards. The only problem here was I'm from America so the terminology used in the video was foreign to me in English so it was hard to realise what he was saying in British English and

then put it into American English and Spanish all at once. Some of the words were: I didn't know the thing was called a barrier; I didn't know how to say 'etiquette'; the Tube, which is just the name, and then when they were saying how you stand and stuff I was trying to picture the scenario in my head and it's different than what would happen at home. I had to listen to it again to know the actual words. Even his accent so there were a lot of factors because it was British English and not American, which shouldn't be that much of a difference but it seemed to be. And when he was talking about London the city I had to think about London is *Londres* and then he was talking about things to the city I was like 'I don't know'.

AM: Do you think that this kind of activity would get easier with practice?

Seq11: Yes. Definitely. Also, if I kept up-to-date with my Spanish it would have been better but I don't have that at home so I don't have the luxury of speaking Spanish all the time. It's like any other job: it's stressful at first and then you learn how to manage every situation. It's almost like going to your first day at your new job: you're scared but you're not going to experience that every time.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq11: I said I was overwhelmed beforehand and I only felt overwhelmed when I was doing the maths. That was very stressful because I'm just not a math person to begin with, even though it's really simple math. I was trying to figure out not just  $9+6$ ; there were bigger numbers! The first time I listened to it it was stressful and I guess listening to it the second time was easier for me to translate but then I wasn't concerned as much with it being correct; I was more focusing on the math. I actually thought I did better speaking when I was doing the maths because I'd heard it once before. You're not focusing as much on the content the second time because you're focusing on the math.

## Seq12

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq12: I think I'm going to be better translating from English into Spanish. I don't know how well I will do at concentrating. I do a lot of multitasking, like watching TV, phone, computer and talking to someone all at the same time so I hope I don't fail at that. When I talk in English I have to think more than when I talk in Spanish so if I have to process first the Spanish and then translate into English I know it's going to take me longer.

AM: Do you think there are any aspects that you might struggle with?

Seq12: It depends on the accent. I think I should be fine but I don't know. We'll see.

AM: How are you feeling before you start the activity?

Seq12: Now, I feel nervous. Not bad nervous but excited nervous! I'm excited to see how I will do and I'm curious.

### [Simultaneous interpreting from Spanish into English occurs]

*Good morning, I'm going to tel- talk to about an activity that ha- is very popular lately in many cities. I'm talking about a what in my when I was younger we called doing running or running [laughs] and if you think it's fine I'm gonna start my my speech. Uh if you look at what is around you in the cities you will see a phenomenon that is everywhere and I'm talking about people who are running and I'm not talking about running because they are late or because they are in a hurry but because they are doing what - in my when I was younger, sorry - we called doing running, which is a concept that is in Spanish but now we in English it's running so it's people who run for pleasure or for sport. Many time I've asked myself why this is such a massive has such a massive success and I've talked about with many people so I'm going to tell you some of the reason that everyone I asked uh has pointed out. First of all, because of the flexibility. Everyone tells you that it's an activity that you can do any time and that so it's easily compatible with a a professional life or with family. Uh one just goes running whenever they can and whatever they can. Furthermore, it's a cheap sport and theoretically only everything you need is are some sports shoe- sports shoes but if you if you research a bit more you know you can spend a lot of money buying trainers, ah t-shirts, iPods, or anything you want. And finally I will tell you that you can do two things: you can either go running as they say ah on your own or you can you can subscribe yourself to an athleticism club, where a professional is going to teach you how to run and get better. Well, [laughs] I don't know if I convinced you but I recommend you to try it as most of the people who have tried it to say that it's a very it's an activity that is addictive so it easily becomes addictive [laughs]. Don't say that I didn't warn you. Good luck.*

### [Simultaneous interpreting from English into Spanish occurs]

*Hola, mi nombre es Peter Hughes [laughs]. Soy británico y hoy os voy a hablar de la etiqueta del metro en Londres y voy a empezar ahora. Puedo imaginar a mucho de vosotros que habréis visitado Londres en los últimos años, que habréis ido a todas las zonas turísticas de Londres, como el Palacio de Buckingham, el Big Ben, el Puente de Londres. También hay muchas otras cosas para hacer en Londres pero la pregunta es cómo llegas a estos lugares? Londres es también conocido por ser una ciudad muy grande y y cara, así que nada de taxis, y bicicletas eh no parece no parece ser muy muy.. ah! Pues, mucha gente coge [laughs] el metro y mucha gente lo conoce como o sea por sus interacciones excéntricas y educadas y puede considerarse que la manera en la que te trans- que te mueves es muy importante. Eh una de las cosas muy importantes cuando llegues a la a la estación: tienes que tener el ticket preparado para pasar las barreras porque la la gente va a estar eh pasando a tu lado. Ten en cuenta que tienes que tener el ticket preparado y una vez pases la barrera tienes que seguir la la dirección correcta, viendo qué qué línea tienes que seguir: eh la línea central, la de Piccadilly, la de Victoria. Tienes*

*que saber qué color tienes que seguir y sobre qué dirección. Después, eh llegaras a a las escaleras mecánicas. Esto es muy importante porque escucharás que tienes que mete- ponerte en la izquier- izquierda no derecha y caminar por la izquierda y tienes que hacer caso y una vez llegas a la plataforma tienes que que seguir caminando porque si te quedas en la el medio al principio se va se va a haber mucha gente allí y y por eso si caminas hacia delante va a ser más fácil para que todos quepan. Una vez llegue el tren recuerda que primero tienes que dejar que los demás bajen del tren. Esto es muy importante porque esto puede crear mucha frustración y tensión entre la gente. Después, una vez estés en el metro, eh te puedes sentar si encuentras un sitio y si no estáte seguro de que te quedaras eh de que te vayas adentro en vez de quedarte en la mitad. Eh si te sientas en un sitio al lado de la puerta eh deja el asiento a una persona que pueda dejarlo, como una mujer embarazada o gente mayor o deshabilitados y, bueno, esto es una norma social que es eh ha sido implementada a viajar en metro y finalmente cuando viajas en metro que disfrutas el resto de tu viaje.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq12: No. I actually found it easier to translate from Spanish to English, maybe because he was talking fast but also because I also had to process so it was actually more difficult to translate from English to Spanish. Also, I realised that when I was trying to think about how to translate a specific part I would get stuck with the maths as well and I would stop writing numbers so it was all connected: I couldn't concentrate on both things at the same time. I found the maths easier into English, maybe because it was easier for me to translate so maybe I had more space in my brain to think about numbers.

AM: Do you think that this kind of activity would get easier with practice?

Seq12: Yes, for sure. I'm not used to translating simultaneously at all so I think if I was to do it more often I would get more used to it and I would improve.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq12: Yes, the nerves passed. I was just trying to make myself think 'If I don't do it right then whatever' but I really wanted to do this and I really wanted to do it well. It was really interesting!

## Seq13

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq13: I think I'm going to be good in vocabulary, in general. I don't have any issues. I think I might get distracted while and talking and get lost with what they are talking about. I grab an idea and I translate it but then I get lost in whatever he said at that point. I have no idea how the maths will go. I like maths but I think it might be a bit distracting. I don't know. I think I will be better listening in English and speaking in Spanish because it easier for me to speak in Spanish than in English. I think Spanish is my dominant language.

AM: Do you think there are any aspects that you might struggle with?

Seq13: I guess keeping up with all they say. In general, I can *get al.l* the main idea but not all the details. Maybe I'll get the main ideas but not all the details.

AM: How are you feeling before you start the activity?

Seq13: A little bit nervous. I've never done it so it's very interesting.

### [Simultaneous interpreting from Spanish into English occurs]

*Good morning. I'm gonna talk about an activity that is very popular nowadays in different cities. I'm I mean what those used to call making footing so, basically, running. If it's okay I'm gonna start my speech now. If you take some attention in what happens in the cities you'll see a detail that happens in cities: people running. Not running because they are going late because they are in a hurry. They are just running or doing footing or what is now known as running. People running for pleasure; running as a sport and I ask myself why so many people do this, why is it so successful. I ask a lot of people and I'll tell you what people usually answer when I ask this. First, because it's very flexible. It's an activity you can do any time and therefore you can combine it with other activities like a professional or familiar activities. You can go running when you can and where you can. Another reason is because it's cheap: basically, you just need running shoes but if you go more in detail you can realise you can spend much more money, spending on little things that are really expensive like shirts, shorts or any other gadgets that you can use. You can go running when you want or wherever you want. You can also join an athletics club, where a professional person can help you improve your the way you run and the time you run. I recommend you that you go running because everyone who have tried it has told me that it's an activity that will hook you up that will make it add- addictive for you and you will keep doing it and good luck.*

### [Simultaneous interpreting from English into Spanish occurs]

*Hola, mi nombre es Pete. Soy británico y hoy les voy a hablar sobre el la etiqueta del [unintelligible] Tube. Me imagino que muchos de ustedes han visitado Londres en los últimos años, visitando todos los sitios turísticos que Londres ofre- ofrece, como el Buckingham Palace, el Big Ben, el Puente de Londres. Hay muchas cosas que hacer en Londres pero la pregunta es cómo llegar a estos sitios? London también es conocida como una ciudad muy cara por lo que los taxis no son considerados y andar en bicicleta no es se considera muy seguro para andar por ciudad. Así que mucha gente toma el Tube, que es el metro. Gente británica es conocida porque es un poco excéntrica y por su forma de ser social y eso lo puedes ver en el Tube. Por lo tanto, la forma de usarlo tienes que tener esto en consideración. Eh les voy a decir los pasos que tienen que seguir. Cuando llegues al Tube tienes que tener los tickets li- listos para cuando llegues a las barreras para pasar la entrada. Una vez que pases la entrada tienes que asegurarte de que vayas por la dirección correcta para ir a qué línea quieres ir: la la roja, la línea central, o la la light blue o la azul claro para Piccadilly, en qué color quieres ir y en qué dirección quieres ir. Después, llegarás a las las escaleras. Escucharás un anuncio que tendrás que pararte a la derecha y caminar por la izquierda. No te equivoques porque no serás muy popular*

*se si te equivocas en un sentido. Mucha gente se amontona alrededor de la puerta por lo que es mejor que te mantengas un poco alejado. Cuando el tren llegue recuerda mantenerte alejado de las puertas para dejar que la puerta salga. Esto es muy importante porque esto causa mucha frustración entre la gente. Una vez en el Tube te puedes sentar si encuentras un sitio disponible y si no está seguro de pararte en el pasillo. Si estás en un asiento de prioridad tienes que estar seguro que darle tu sitio a alguien que lo pueda necesitar, como puede ser una mujer embarazada a una persona mayor. Esta es una regla social que debes implementar cuando estás viajas en el Tube. Y, después, llegaras a tu destino y puedas disfrutar de las atracciones turísticas de Londres.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq13: I think it was easier the other way but I think the jogging speech was just easier. They were both easy but I would say that the jogging speech was a little bit easier. I found it marginally easier working into English. I found the maths a bit distracting, especially in the second one. I forgot I was adding. I had already done three speeches by then so I was tired.

AM: Do you think that this kind of activity would get easier with practice?

Seq13: Yes, I think so. I hope so! You're just not used to listening to something and then at the same time speaking. I guess if you do it very often it helps your brain to mix both languages.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq13: I guess I didn't feel more nervous but at one point but I felt like I was missing a lot of parts so I felt like I was falling behind. Then I kind of threw out some parts that I couldn't get back to so I just did what I can. I had concentration problems but that was towards the end.



## Seq14

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Seq14: I often have mentioned with friends that I have the feeling my Greek or my rudiments of Italian or German are stored in my mind quite far from my English. My feeling is that my Spanish is not stored. It is always there. With my English the feeling is more and more very similar, with the difference that, with English, I feel more insecure with grammar or, often, some specific vocabulary - in particular registers - feels limited. My French, though, seems to be 'flooded' with my English. There was a time when French was my first foreign language (up to when I was maybe 22 or 23) and I was getting near-native fluency. My English did not only later surpass my French but somehow it has been weakening my French over time because of the many interferences I feel. When I try to speak French often the English word appears in my brain first and I have to make the effort to look at it, realize it is English, reject it and go back looking for the French word. This takes time and, especially when speaking, it may interrupt the flow of my conversation, the whole thing being very tiring. I feel, though, I could reverse this with some practice. But I am not using French often, whereas I use English every day. I would describe it like this: 1. Spanish is everywhere. I do not need to think about it. The only thing I have noticed lately is that, although the grammar I use is correct in Spanish, I tend to avoid structures that WOULD BE wrong in English. 2. English is growing every day and reaching far corners in my mind, leaving little space to my former dominant foreign language. There is feeling of some sort of competition and interference between L2 and L3 but French does NOT bother me when I speak English, although I seem to remember it DID right before English took over. 3. French is the opposite: weakening. 4. Other minor languages in my mind do not feel threatened, since they never were very strong: German, Italian, Portuguese, Modern Greek. 5. Classical languages, Classical Greek or Latin, seem to be stored in a completely different region, maybe because they are not used in speech, only in reading or translating.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq14: For sure to have something to think about will make it more difficult. I've noticed when I have to translate from English into Spanish it's harder for me to continue listening to the person speaking. I guess that understanding Spanish is easier so I don't have to concentrate so much on the input: I just concentrate on producing and that's easy for me.

AM: Do you think there are any aspects that you might struggle with?

Seq14: Keeping up with everything, I suppose, especially when you hear someone speaking in English I guess that's harder for me so getting that message and conveying that into Spanish is perhaps more complicated than the other way around.

AM: How are you feeling before you start the activity?

Seq14: Curious.

### [Simultaneous interpreting from Spanish into English occurs]

*Good morning. I'm gonna speak to you about an activity that has become terribly popular lately in numer- in many cities. I'm referring to what in my youth we called eh footing ah eh nowadays running. If you think I believe now eh my speech. If we eh make atten- pay attention to what happening in cities you have observed the phenomenon that happens everywhere. I mean people running. I'm not meaning running because they are late to attend some meeting or something or because they're in a hurry but basically because they are doing what we used to call 'make footing' in Spanish and I'm referring to the the the activities now called running in Spanish. I'm referring to people that is running people that are running as a sport, out of pleasure. I wonder why people are having uh that as a very eh interesting activity. I'm spoke I've spoken with many*

people and I'm gonna tell you what most people answer when they ask about this activity. All they all of them say this is a very flexible activity that you can do at any moment and therefore it is eh easily compatible with a professional life or with a pre- with a family life. One can go out and run eh at any moment and wherever it is possible. Moreover, this is a very cheap sport: in theory, you only need sneakers but when you go deeper into the subject you know that you can spend a little fortune buying shirts, eh sneakers, iPods, everything you want. Finally, I can tell you that you can do two things: either go and running eh for free, wherever you want or whenever you want or you can also eh enlist yourself in a club of athletics, where a professional can teach you how to run and how to improve your marks. Well, uh I don't know if I have I have convinced you but I mm- would tell you to try it because almost everyone that has tried it eh its eh the eh opinion that it's an activity that eh becomes addictive with time. Then, eh don't say I didn't warn you. Good luck.

#### [Simultaneous interpreting from English into Spanish occurs]

Buenos días. Buenos días. Me llamo [unintelligible]. Yo soy británico y os voy a hablar de la etiqueta del metro en Londres. Puedo imaginar que muchos de ustedes han visitado a Londres los últimos dos años para visitar a diferentes ah atracciones en Londres, como Buckingham Palace, el puente de Londres. Hay muchas otras cosas para ver en Londres. Sin embargo, cómo vas a estos lugares? Londres también se conoce por ser un lugar muy caro como los taxis que están fuera de la cuestión eh andar en bicicleta es realmente no una forma muy segura de moverse por la ciudad. Así que mucha gente toma el metro. Ahora, los británicos se conocen por eh sus extrañas formas de comportamiento y de de de etiqueta y se puede comprobar en la forma en la que los británicos se mueven en el metro y de qué forma se comportan. Así que podríamos hablar de los diferentes etapas. Cuando llega a la estación tiene usted el ticket el ticket preparado para pasar las barreras. Eh es importante tener el ticket preparado antes de entrar. Una vez que pasas por las barreras tienes que saber eh en qué dirección tienes que ir tienes que saber en qué dirección te interesa ir tienes que ir hacia una línea roja eh línea roja eh la línea Piccadilly, la línea de Victoria. Necesitas saber cuál es el color de tu línea y cuál es la dirección. Luego, tienes que subir a las escaleras mecánicas y necesitas oír las avisos eh sonoros que te hablan si tienes que estar en la parte izquierda o derecha. Cuando arr- llegas a la a la plataforma tienes que poderte mover. Mucha gente se acumula en la entrada y eso estresa a mucha gente si hablas uh si andas más adelante en la plataforma puede ser más fácil entrar en el metro después. Cuando el tren llega tienes que retirarse para dejar que la gente que llega baje antes de que tú entres y eso es muy importante porque esto puede causar mucha frustración y muchas tensiones entre la gente. Cuando estás dentro puede sentarse si encuentras un asiento vacío y si no puedes sentarte tienes que moverte y separarte de la entrada. Es importante dejar eh los lugares de prioridad hay que dejarlos cerca de la puerta para la gente que lo necesita más, como una mujer embarazada, eh minusválidos, eh personas mayores. Es más una forma de comportamiento social que se eh que se tiene que aplicar en el metro. Tienes que llegar a tu destino eh sin problemas y tan pronto como puedas. Muchas gracias.

#### Post-Interpreting Think-Aloud Protocol

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq14: Yes. With my first impression in the warm-up, I definitely thought the English into Spanish was harder. Now, with the speaker, I don't see the difference so marked as before. But, again, my impression is that when I hear my native language, since I don't have to pay attention to it because it comes into my mind more automatically, I can concentrate more in production. Here, English, I understand but the effort in my brain is a little more complicated. That's my feeling. I have to both pay attention to what he says and - funnily enough - it's my native language where I have to produce where there is more effort to understand what I hear and this makes the whole experience a little bit more complicated. It is more complex when the maths is involved. With the multiples of three I started thinking that I had made a mistake so that was distracting. The +6 was easier and I should not have made any mistakes. I got more numbers into English than I did into Spanish.

AM: Do you think that this kind of activity would get easier with practice?

Seq14: Yes, for sure. I've never done anything like that; I've never done any interpreting.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq14: It was different. When you speak a foreign language people think that you're translating your native language. You are not. Not at all, especially if you master the language. When you don't, maybe you do. Otherwise, you don't or you shouldn't. When I hear Spanish speakers speaking English and I see transparently the Spanish syntax I don't like that. I don't have to do it usually but I'm not used to perhaps translating or interpreting from English into Spanish; I'm more used to working from Spanish to English.

## Seq15

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Seq15: I'm not sure whether they're both stored in the same place. I think it depends on the situation and who I am talking to. For instance, if I am talking to my older sister or a close friend, I often find that both languages are present in the conversation and we use them freely without any limits or boundaries. However, if I am talking to my mom, I am always in Spanish-mode, even if I forget certain words, because I know she would not understand me in English, and I have never communicated with her in the English language. The same goes for my dad, any elderly member of my extended family, or when talking to a stranger back home. So, for me, I would say it depends on the person and context. I would say sometimes they could be quite separate and other times they're both on my mind.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq15: Probably just talking in Spanish. I'm so bad at talking in Spanish and I get really nervous because I'm super self-conscious of my Spanish because Puerto Rican Spanish is stigmatised. The Spanish that I know has English words in it because the dialect has it. In the practice I found that while I was talking I was missing what the person was saying and it didn't help that it was in British English.

AM: Do you think there are any aspects that you might struggle with?

Seq15: Probably if he speaks really fast and I'm talking at the same time.

AM: How are you feeling before you start the activity?

Seq15: I'm kind of feeling disappointed in myself! I suck at this! Good thing I'm not an interpreter because my Spanish sucks!

#### [Simultaneous interpreting from Spanish into English occurs]

*Good morning. I'm gonna be talking to you about some popular activities that will be happening in has have been happening in several cities. I refer I am referring to uhm running as an activity. In city streets you might have observed the phenomenon of people running. Not running because they're in a hurry but that they're doing something that I that used to be called footing footing but they're referring to it now as the word running, that is running for uhm pleasure. A lot of times I've wondered why running has taken off so popular as a popular activity. So, normally what people tell me when I ask this question to them is: firstly, it creates flexibility. Many people believe you can do it at any moment so it's easy to run, even in your professional like maintain a professional life and go running, wherever and whenever you can, and it's a cheap sport to do: all you need to have is a piece of some sneakers. Sneakers. You can also spend a fortune on t-shirts and buying iPods. You can run wherever but you can also sign up for a special club sporting athletic club so you can train to become a better runner. I don't know if I've convinced you but I suggest that you try it out because most people that have uhm done it have said that it's a sport you can get hooked on; it's addictive and don't say that I didn't warn you.*

#### [Simultaneous interpreting from English into Spanish occurs]

*Hola, mi nombre es no entendí el nombre pero brita- es británico. Hablar del tren en Londres. Puedo imaginar que m-muchos de ustedes han visitado a Londres en últimos años a visitar los lugares turísticos como London Bridge, Big Ben. Hay muchas cosas para hacer pero la pregunta importante es cómo llegas a ese a a esos lugares? El ciclismo es difícil hacer si corres en bicicleta. Muchas personas deciden coger el metro. Los británicos se reconocen por sus buenos modales y eso se puede ver reflejar en el tren y los buenos modales son importantes. Tienes que seguir los próximos pasos: cuando llegas al a la estación tienes que tener la taquilla ready*

*porque muchas personas van a estar eh en prisa detrás de ti y cuando atraviesas la la pared la taquillera vas a ver que decidir si vas a coger el Central Line o el Piccadilly Line y vas a tener que s- que saber cuál color o cual dirección vas a tomar y tienes que seguir la las las órdenes de los anuncios o si no lo vas a estar no vas a causar problemas. Cuando estés en la plataforma vas a conseguir lo más fácil y saber cuál tren tienes que coger y cuál dirección tienes que tomar. Cuando el tren llega eh una de las órdenes es pararse un poco más atrás y esto es bien importante hacer. Ah shit. Oh. Cuando te sientas si te sientas en primera clase la el asiento al lado de la pared tienes que que seguir las reglas de de modales y si hay una señora preñada dale la prioridad y dale el asiento a ella and I forgot the last line 'cause I was talking and my Spanish is horrible! Sorry!*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq15: I think it matched my expectations because I have this experience - but not to the same extent - when I'm trying to write an email and someone is talking to me in a different language and I'm like 'Shut up!' and they don't shut up. It's really bad when I'm trying to communicate in Spanish and someone is talking to me in English because I have to physically think about my Spanish because I'm more used expressing myself in English. I was schooled in English, even though I spoke to my family in Spanish, and most of my time was spent in school in English.

AM: Do you think that this kind of activity would get easier with practice?

Seq15: Probably. Yes, I think so. It's like when you write a paper or an email that has to be academic. Once you've done it a couple of times you sort of know. I think it also helped having a piece of paper and a pen because it gives you that false sense of security, even if you don't write anything. Obviously, because I had already heard the information before, I was able to remember more the second time. Also, I picked up on some stuff that I hadn't picked up in the previous occasion and I think that was because I was focusing on something, even if it was something different. I was focusing on something rather than being nervous about not catching what they were saying. The maths actually helped me focus. For instance, in the one with the train I hadn't picked out people with disabilities and the escalator standing on the right because I was worried about messing it up. Because I was focusing on the piece of paper the second time, it enabled me to be a better listener.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq15: I still feel disappointed because I made these stupid mathematical mistakes! They were talking slowly in the speech but in the practice run I tried to interpret it and it was so difficult and I found it really stressful and intimidating. The real interpreting was much less intimidating because they were talking slowly but I still found it difficult translating into Spanish because there were some words that I wasn't familiar with. In Puerto Rico, we don't have a train so that's very culturally specific! How do I find the word for 'ticket barrier' in Spanish? We don't have those in Puerto Rico! I had to invent a word because I didn't know the proper word for it. I'm not familiar with all the terminology and I'm definitely more dominant and better at expressing myself in English.

## Seq16

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Seq16: Mine are the two of them together and I would use them simultaneously, with a stronger presence of Spanish. It is harder to completely separate them: that requires more concentration on my part. For example, when I'm teaching Spanish I try not to use any Galician forms. I know the characteristics that define each of them but I've always been with people who knew the two of them so there was no need for me to separate them until I moved abroad.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq16: Not much! I think talking and listening at the same time will be okay. I would say translating will be hard because I lack vocabulary. No, seriously! The idea of interpreting is hard for me. At some stage I will get stuck with one word and be like 'How do you say this?' After the practice, I think English into Spanish will be easier for me. I don't know why. I don't know which of the two languages I am more dominant in now because I'm using English all the time. I should find Spanish easier but I've been here a long time and I use English more. I find writing in Spanish very difficult because I don't have any vocabulary in Spanish anymore. Whenever I'm in Spain I say the same thing about English, though! I'm surrounded by English so whenever I get stuck I try to translate it into Spanish, while if I'm stuck when speaking English I will go around until I find the way but I would very rarely translate it from Spanish. Does that make sense?

AM: Do you think there are any aspects that you might struggle with?

Seq16: The maths. It's not the idea of struggling with maths itself: it's the idea of having to do maths at the same time. I'm used to using the two languages at the same time so I'm totally okay with that but I haven't done maths in 10 years and I was pretty bad then, even if this is just adding. It will require concentration, put it that way!

AM: How are you feeling before you start the activity?

Seq16: I feel fine. I'm not nervous but I am curious. I'm not anxious at all but I am interested in seeing how all this works!

#### [Simultaneous interpreting from Spanish into English occurs]

*Buenos dias oh! Good morning. I'm going to talk to about an activity that has been a gr- great success in several cities. I'm talking about jogging or running. So, I'm going to talk begin my discourse now. In the in the street it's really common to see that this new eh phenomenon that is pe- people running, not because there are late but th- they are just jogging and which some people call running. So, it's basically people that run out of enjoyment so sometimes I've wonder wh- what is why is this is so successful. I've asked I've talked with a lot of people and this would be generally answer. First of all, because it's very flexible. Everybody says that it's a an activity that you can do whenever you want since easily adaptable to your working life or eh with your family life. People go jogging whenever they can and wherever they can't. Furthermore, it's a cheap sport: everything you need is a cheap runners, although runners like if you want to buy the whole set, like t-shirts, eh runners, iPods then it would be very expensive. And finally you could go running whenever you want whenever you want like free or you can join an athletics club eh a club where eh a professional will teach you how to improve and reduce your time for running. I don't know if I have convinced you I I would advise you to try because it's an activity that really hooks you. Ah so don't say that it's eh that I haven't eh well and just to conclude eh it is a very addictive activity so don't tell me that I haven't gi- advised you on that.*

#### [Simultaneous interpreting from English into Spanish occurs]

*Holas, me llamo eh Peter ehm soy británico y hoy les voy a hablar del metro en en Gran Bretaña. Me puedo imaginar que muchos de vosotros habéis visitado Inglaterra en los últimos años para visitar los [unintelligible] más turísticos como el Big Ben, el Puente London Bridge, Bu- el Palacio Buckingham. El problema eh la pregunta es cómo se llega a estos sitios porque Londres es muy grande y es muy caro entonces ir en bici eh pagar un taxi no no es muy accesible y ir en bicicleta tampoco entonces la gente habitualmente coge el metro. Eh los británicos generalmente se son definidos como excéntricos a nivel de educación y que ser educado pues es algo muy importante. Entonces, lo que tenemos que te- tener presente es que vamos a llegar a la estación de de tren que tenemos que tener el ticket listo en la ventanilla y para pasar esta ventanilla pues tenemos que saber en qué dirección tenemos que ir: si vamos en la línea roja o en la línea azul o si vamos en la Victoria. Entonces, para saber en qué dirección vamos. Entonces, cuando llegues a las escaleras a las escaleras mecánicas tienes que saber en qué lado te quedas. Va a ser algo es algo que ya lo anuncian y te- para que si tienes que saber si es a la izquierda o a la derecha porque hay gente que va más rápido. Entonces, si. es al- [sighs] y cuando lleg- llegues al tren recuerda de que tienes que primero dejar salir a los que están en el metro antes de entrar tú. Una vez que estás en el tren o en el metro te puedes sentar o si no tie- si- tienes que [sighs] eh si no te puedes quedar de pie pero estate seguro de que avanzas en en el metro en el tren para no atascar la entrada y ten presente que te que los asientos los tienes que dejar a las personas con más dificultades. Espero que va- que tengáis un buen viaje.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq16: I have no idea! I struggled to imagine which would be hardest at the start! The first time I did the into Spanish was very hard. I found it really really hard. The second time was much better. As soon as I started doing the maths I felt like I got everything. I don't know if my sums are correct, though! I found the into English fine. I found the into English really easily in general terms but I couldn't do the maths at all. The into Spanish I found really hard the first time but the second it was much easier. I actually got everything they were talking about, which I did not get the first time. I don't know if the maths helped me focus or if it was because I was hearing it a second time. If I were to only do it once then the one into English went better than the one into Spanish.

AM: Do you think that this kind of activity would get easier with practice?

Seq16: Yes.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq16: I didn't feel much stress. At the start of the first one into Spanish it was a bit odd because I felt like I didn't get all the details but it wasn't very stressful. Nothing affected my nerves.

## Seq17

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Seq17: I think this storage works like a battery. It discharges when you do not practise the language, down to exhaustion, while it charges when you practise.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq17: I think it is much easier to translate from English to Italian. The translation from English is the best part I will do, while the translation from Italian to English will be a bit more difficult for me.

AM: Do you think there are any aspects that you might struggle with?

Seq17: I think my problem with English is more about writing, rather than speaking. Reading and listening comprehensions for me have always been quite easy for me, whereas when I speak I notice that I always use the same vocabulary so I should broaden my vocabulary! I know how to use good words but maybe not in the proper way.

AM: How are you feeling before you start the activity?

Seq17: No stress. I just want to have a look at how it is. A bit of curiosity as well.

#### [Simultaneous interpreting from Italian into English occurs]

*His name is Giovanni Sallicci and he will talk about uh young people and social networks. Some research says that more than half of the the mmm young people who use social network they discuss of uh be- behaviour not legally approved. This was uh research by professionalists like uh medics. It was a study about 500 uh 18 years old. I- it was found out that it was they were social networks were used to discuss about uh alcohol and drugs in the most of the cases, while in the 24% of the cases it was about uh sex, while in the 12% of the cases wa- was about violent uh behaviours. It seems like that if guys do sports or are involved in religion stuff they are more prone to do this kind of uh discussions. The researchers uh communicated the results to the authorities uh so okay and the authorities has uh sent uh an advertising saying that they should change this kind of uh behaviours and they were uh and they informed the guys and the girls about the risks in in in this kind of usage of the social networks. Most of them has uh changed the the things they were doing and they eliminated crucial informations about this kind of beh- bad behaviours. What we becomes from this situation? Uh is that all these behaviours that was were always part of the young soc- society have found some space in the social networks and I mean it was something that people did before not in the social networks but now they are doing and social networking just because the social network there are.*

#### [Simultaneous interpreting from English into Italian occurs]

*Il uh intervistatore è inglese e parlerà adesso. Penso che molti di noi abbiamo visitato Londra negli ultimi anni e visto posti quali Buckingham Palace, il uh London Bridge. La domanda principale pero e come arrivi in questi posti? I taxi sono fuori questione e anche le biciclette non è un non sono un metodo molto utilizzato. La maggior parte delle persone usano la Tube, cioè la metropolitana. Si può vedere si possono vedere molte interazioni personali all'interno della metropolitana. Innanzitutto, la cosa importante è avere il biglietto pronto quando si arriva alle barriere perché le persone saranno correndo e molto di fretta. Una volta passata le barriere bisogna essere attenti ad andare nella direzione giusta e su quale colore della linea andare. Per esempio, la l'azzurra per Victoria e ma bisogna stare attenti a in che direzione si va. Bisogna stare attenti a stare fermi sulla destra e viaggiare sulla sinistra sulle scale mobili perché questa è una cosa molto sentita eh appunto a Londra. Quando il treno arriva bisogna essere attenti ad aspettare che le persone scendono e mettersi da parte prima di poter salire perché questo crea*



*molta attenzione tra le persone se non viene rispettato. Se no si trova un posto bisogna stare attenti a non sedersi in un posto con priorità se c'è qualcuno che ne ha bisogno quindi si può utilizzare finché qualcuno uh che lo che ha la priorità per questo posto non abbi.. Si spera che si arrivi a destinazione senza altri problemi.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq17: Yes, I think so. I found the English into Italian the most difficult, especially with the numbers. Sometimes while writing the numbers I just stopped because I couldn't do both. The first speech into Italian without the maths was quite easy.

AM: Do you think that this kind of activity would get easier with practice?

Seq17: Yes, I think so. I think when you change the subject, the problem is just the vocabulary. That is something that it can be improved so it's just listening and listening again and then you'll get the vocabulary. Practice makes perfect.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq17: I was a bit nervous while I was writing numbers. I was thinking of doing it smoothly and with a certain rhythm but at a certain point I stopped. I was not nervous about the conversation because I was just thinking if I don't get one part I'll go to the next phrase and start again, while with the maths I was thinking I would be smooth and methodic but I was a bit more nervous while I was writing the numbers. I was not absorbed in the maths. I was trying to interpret what he was saying and trying to get the more number I could. I don't know if that was the aim of writing the numbers but I just used the spare time to fill the numbers because I wasn't able to do both at the same time.

## Seq18

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Seq18: I feel like I have two stores for English and Italian. I don't know where they are physically located but they are separate. Italian and I are indistinguishable but I know my English is not with them!

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq18: It's very difficult because when I speak I hear my voice and I don't hear any more what they say so that should be a way of not hearing my voice because when I hear my voice I can't hear them and I can't interpret. I don't think it's a question of volume. I will definitely be better from English into Italian because I'm never lost for words in Italian. Sometimes I don't know how to translate Italian expressions into English but never the other way round.

AM: Do you think there are any aspects that you might struggle with?

Seq18: Following the speed of talking so being able to translate everything word for word, especially when I'm actually talking because then I don't really hear what they're saying; I mostly hear my own voice. Translating from Italian into English is challenging because my vocabulary is much more reduced compared to Italian. It's not always easy to find all the terminology that I need. I'm not sure about the maths; I'll need to try. I think I will find it more difficult because it's one more thing to process.

AM: How are you feeling before you start the activity?

Seq18: It would be nice if it wasn't a test but because it is a test I'm a bit nervous. It's always the case, I think "Oh my God, I'm going to perform!"

#### [Simultaneous interpreting from Italian into English occurs]

*My name is Giovanni Sallicci and now I'll make a speech about uh uh y- young people and social networks. Seemingly, from some research, it emerged that more than half of the you- young people who use MySpace and Facebook they talk about uh dangerous behaviours or at the limits of legality. It's about paediatrici- paediatricians and uh doctors specialised with uh adolescents. 500 young young people uh about 18 years old, randomly chosen. So, the in 24% of cases, young people were talking about uh sexual behaviour and 14 thou- 14% of uh profiles of discussions were talking about violent behaviour. It was also found that young people busy with different activities there was a a lower tendance about uh discussing about this type of uh topics. Another study concerns 140 profiles that have been found pieces of information that relate to dangerous behaviour. Uh the authority have been contacting uh half of the profiles have been have received a message a warning message so that they could take off the piece of information incriminating. {laughs} there were also they were given also uh warnings about the risks of dealing with unknown people. Mmm also, the young people who received theis warning email uh modified the profiles so they are eliminating information relating to alcohol and drugs and sexual behaviour. What can we say about from all this? This is a situation where be be-haviours that from always have had to do with uh context. From it's uh young people have always discussed about uh... but Internet creates virtual groups where this way of sharing information.*

#### [Simultaneous interpreting from English into Italian occurs]

*Ciao, io sono il mio nome è Mario e sono inglese. Oggi parlerò della metropolitana a Londra. Immagino che molti hanno visitato Londra negli ultimi anni o un paio d'anni e sono stati a Buckingham Palace a hanno visto il Big Ben o London il ponte di Londra o London Bridge. Comunque, la domanda è come si arriva in questi posti? Londra e anche nota per essere molto costosa e il taxi sono al di fuori discussione. C'è un modo sicuro per andare in per visitare la*

*città. Molte persone prendono la metropolitana. Le persone sono note per la loro strana gentilezza il modo in cui interagiscono socialmente. Ricordate questi passi: una volta che arrivate in metropolitana avete dovete avere i biglietti pronti per superare le barriere e una volta che avete superato le barriere dovete essere sicuri di andare nella direzione giusta quindi guardate verso quale li- quale linea andate: la linea rossa o la linea blu o la linea per Piccadilly o la ... eh dovete anche sapere verso quale linee in che direzione. È molto importante eh che dovete camminare a destra e e stare fermi a sinistra e dovete essere attenti perché altrimenti non sarete eh sarete guardati male, non sarete molto popolare. Se guardate se andate giù eh trover- trov- sarà più facile trovare un modo per raggiungere il binario. Eh dovete anche essere veloci a salire sul treno perché altrimenti gli altri saranno seccati. E una cosa che generalmente causa molta frustrazione tra i passeggeri. Se per caso sedete vicino alla sedia al priority seat stati certi m- assicuratevi che non ci sia qualche altro che abbia bisogno di questi posti a sedere: per esempio, una persona anziana. E questo è...arriverete a destinazione senza problemi ehm e avrete vi divertirte.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq18: It was harder than I thought! I think I was better into Italian because I was terrible into English. I felt definitely more comfortable because it was easier into Italian.

AM: Do you think that this kind of activity would get easier with practice?

Seq18: I'm sure it will, yes. I'm sure the more you practise the better you become. Getting used to hearing your voice or not hearing your voice at all would make it easier but then you say that even professionals listen to their voice. Hearing your own voice makes things difficult.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq18: I don't think I was nervous during the tests but I wanted to be able to do well in them.

## Seq19

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Seq19: It's an interesting question! I have the feeling that the language in use is in my forehead. I feel like all my other languages then come from the back of my head but I can't say if they are stored in two different parts.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq19: I think I will be more able to interpret in Italian because I'm a native in Italian and I am a bit afraid the mathematical things to write will be a distraction!

AM: Do you think there are any aspects that you might struggle with?

Seq19: Well, just interpreting simultaneously. Maybe interpreting into English, being clear and trying to understand what the speech is about in English. Oh, and the maths!

AM: How are you feeling before you start the activity?

Seq19: I'm not extremely nervous. I'm a normal amount of nervous! I just want to give a good impression.

### [Simultaneous interpreting from Italian into English occurs]

*His name is Giovanni Sallicci. He will speak about young people and social network. More than half of the young people using MySpace and Facebook they are speaking about eh illegal concepts or dangerous topics. He is talking about a research about about eh about 500 young people using networks so they were, for example, speaking about alcohol and drugs, sex in the majority of the conversation and uh a uh minor percentage they were talking about violent topics. There is an also another study about uh risk-full uh behaviour in social networks. Half of these people they receive to be uh aware and delete uh dangerous information so get get aware of their of what they are writing that is illegal that they are maybe chatting with uh strangers. Almost all the young people who received this uh uh advice they changed their the information of their profile. The conclusion is: some kind of behaviour who were before more uh normal in other contexts they are now taking place in social networks and this is happening probably because they have their privacy, adults cannot see what they are doing so young people they feel more free to write what they really like.*

### [Simultaneous interpreting from English into Italian occurs]

*Si si parlerà oggi di etichetta metro e soprattutto alcuni luoghi di Londra, come Buckingham Palace, e come arrivare in questi posti centrali. Visto che i taxi sono così costosi e e la metro - detta Tube -diventa la il modo di trasporto più usato sebbene costoso anche questo. C'è un'etichetta da mantenere eh prendendo la Tube. So, innanzitutto devi avere il biglietto pronto appena arrivi all'entrata della Tube. La la gente non vuole aspettare e quindi devi essere pronto col biglietto. E devi anche essere consapevole di che colore, che tipo di linea vuoi prendere: se la rossa o...e soprattutto anche la direzione. E non fare confusione sui lati del eh sulle direzioni: sulla sinistra, sulla destra. E non rimanere nell'entrata perché eh causerai un ostacolo a chi entra. Un'altra regola dell'etichetta e lasciare prima scendere dalla metro chi deve sc- chi deve scendere e poi salire. So, s- quando ci sono i priority seat devi dare la precedenza a chi ne ha bisogno. Altrimenti, le puoi utilizzare. E dopo aver osservato queste regole eh arriverai tranquillo e veloce alla destinazione.*

### Post-Interpreting Think-Aloud Protocol

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq19: I think they were both at the same level of difficulty. I expected I would be better at speaking in Italian but really it's the same kind of level of troubles. I had equal difficulty swapping from one language to another simultaneously. The maths stopped me thinking and it's difficult to work at the same time on the maths of the interpretation. Too many things at once.

AM: Do you think that this kind of activity would get easier with practice?

Seq19: Yes, I think so. It should be a habit to swap from one language to the other and to pay attention to the right details and synthesise in the right way.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq19: I think it was more or less the same. I wanted to be as efficient as I could so I was focused and not too nervous but just a little bit.

## Seq20

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq20: Not the maths! Too much multitasking! I'm afraid to fail at words in English as sometimes words are not 100%. I think I will be more comfortable working into Italian but really I have no clue!

AM: Do you think there are any aspects that you might struggle with?

Seq20: Keeping up with the speed and delivering accurate information and not missing important bits. In the warm-up there were things that I would have liked to translate but I didn't. Then there's the problem of not getting the right word.

AM: How are you feeling before you start the activity?

Seq20: I'm curious!

#### [Simultaneous interpreting from Italian into English occurs]

*My name is Giovanni Sallicci and now I will uh have a speech that talks about uh young people and social networks. Uh according to some research it emerges that over half of young people utilising MySpace or Facebook uh discuss high-risk behaviour or borderline with legality. It is uh official studies carried out by paediatrician specialised uh doctors in uh uh development psychology. Uh 500 profiles of 18-year-old uh uh kids were analysed. In 41% uh of uh cases social networks were utilised to exchange information about alcohol or drug use. In 24% of cases uh they discussed sexual behaviour. In 14% uh profiles they discussed or chatted about uh violent behaviour. It was also noticed that uh among young people involved in other activities - like religion or sports -there was uh less tendency to discuss uh this risky behaviour. Uh the other part uh of the study regarded 190 profiles uh with uh still regarding risky behaviour. Researchers communicated these results to authorities and half profiles uh received a warning message, inviting uh them to uh modify the profile and elimin- eliminate the information. The uh kids uh were sensitised uh as to uh risk involved uh in exchange of this type of information with uh strangers that you might uh meet on the net. Uh nearly all uh the kids that received the warning email modified their respective profiles, in particular eliminating information concerning uh drug or alcohol use and sexual behaviour. What can we uh infer from this? I'd say it is a situation where behaviour that uh have always existed in juvenile contexts have found expression through the net and social networks. Young people have always discussed uh forbidden topics when they get together in groups far from the indiscreet presence of adults. The net simply creates virtual groups where these behaviours of sharing of information of information sharing can be re-proposed uh naturally.*

#### [Simultaneous interpreting from English into Italian occurs]

*Buongiorno. Il mio nome è Peter Hughes, sono uh inglese e oggi vi parlerò dell'etichetta uh della metropolitana londinese. Immagino che molti di voi abbiano uh visitato Londra negli ultimi anno per visitare i i luoghi turistici come Buckingham Palace, Big Ben, il Ponte di Londra. Uh ci sono anche cose da fare a Londra ma come arrivi in questi posti? Uh Londra è conosciuta per essere un luogo molto costoso. I taxi sono fuori discussione e andare in bicicletta uh non è visto come un modo sicuro per andare in bicicletta così molte persone prendono la metropolitana. Eh gli inglesi sono uh noti per uh il loro senso dell'educazione strano e per le interazioni sociali. Eh il modo di prendere la metropolitana è molto importante. Cosa c'e bisogna da fare? Seguire i seguenti passi: una volta che si arriva alla fermata del metro uh bisogna avere il proprio biglietto uh per uh la bar- per arrivare alla barriera perché le persone uh correranno davanti a voi quindi una volta attraversata la barriera e importante sapere che si va nella stessa uh uh direzione giusta se v- b- bisogna se si vuole sulla red line, o sulla azzurra per Victoria quindi il colore è la direzione. E poi se arriverà alla scala mobile. E molto importante uh perché*

*l'annuncio vi dirà di stare uh uh in pie- di stare fermi sulla destra, camminare sulla sinistra. Una volta che sulla piattaforma occorre camminare fino alla fine perché uh molte persone tendono a rimanere raggruppati intorno al- al- al- all'ingresso. Eh in questa maniera sarà molto più facile salire sulla metropolitana. Una volta che il treno arriva alla stazione ricordatevi di fare un passo indietro e far scendere le persone. E molto importante perché questo causa un sacco di frustrazione e tensione tra delle persone. Una volta che siete sulla metropolitana uh potete sedervi hai trovato un posto ma se non trovate uh andate anzi di stare vicino alla porta. Se siete in un posto riservato vicino alla porta e importante uh dare il posto ad una persona che potrebbe avere bisogno: una persona anziana o disabile. È una regola sociale che vale quando si va in metropolitana. Una volta arrivate a destinazione potete uh godere il resto delle del del vostro viaggio.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq20: I thought it would be easier to translate into Italian and it wasn't! It's possibly because I'm using English more at the moment. I have been thinking about this also in terms of another piece of research I'm participating in, which is about academic writing and when I think about I don't think I've ever written a piece of academic writing in Italian! I've spent most of my adult and professional life dealing with English. Also, when I was doing my previous Master's it was through English and it was very challenging and that really helped improve my English a lot. As a result, the Italian really went down the drain. I really started experiencing difficulties when I travelled back to Italy. I wasn't speaking proper Italian and I felt that I had to explain things to Italians. It was more of a sensation than a reality but that was the impression that I had. I found the maths in this activity extremely distracting.

AM: Do you think that this kind of activity would get easier with practice?

Seq20: I think so, yes. Even in the way you phrase things differently - with the obvious differences between English and Italian - the second time around. I was able to reformulate things in a way I was happy with the second time around and I had a second chance to catch things I missed first time around.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq20: I liked it; I enjoyed it! It was like a good challenge to keep your brain ticking over!

## Seq21

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq21: I have no idea, to be honest! Certainly, I think I will be stronger working into Italian because I'm a native.

AM: Do you think there are any aspects that you might struggle with?

Seq21: No, it's just difficult to do!

AM: How are you feeling before you start the activity?

Seq21: A little tired but that's okay! It's normal!

#### [Simultaneous interpreting from Italian into English occurs]

*My name is Giovanni Sallicce and I will give a speech that will talk about social media. It seems that eh from some research more than half of eh young people who use MySpace and eh talk about difficult behaviour eh or illegal behaviour. Official studies carried out by paediatricians and doctors... A study has examined the profiles of 500 18-year-olds, chosen at random. 41% of them eh used the network eh social network on how to use drugs and alcohol. Otherwise, they were discussing sexual behaviour and 14% eh f- eh focused on eh violent behaviour. There is eh less of a tendency to talk about less eh risky type of behaviours. 190 profiles they were found eh discussions on eh... Researchers discussed these results with uh uh authorities and they received w- warnings from authorities inviting them to eh change their profiles and they were also eh made more alert about the dangers of discussing these topics with eh others online. Most eh though most of those who received eh a warning by email modified their profile, eliminating all the information that eh was related to the use of drug and alcohol and sexual behaviour. So, what can we learn from all this? We can learn that eh behaviours that normally have always been well the norm in in eh amongst young people now they have found a new channel of expressions through social media. They talk about eh eh behaviours that are illegal. The network creates virtual groups where these eh this exchange of information is re-proposed naturally.*

#### [Simultaneous interpreting from English into Italian occurs]

*Allora, oggi parleremo del eh del codice di comportamento in metropolitana [sighs]. Eh ci sono mm diverse cose che si possono fare a Londra. Also, eh Londra e anche un un paese molto costoso quindi molte persone prendono la metropolitana. Eh i britannici sono conosciuti per eh essere persone molto cortesi e quando arrivi si arriva alla metropolitana alla barriera eh bisogna avere il biglietto pronto e poi una volta superata la barriera eh uno deve decidere se vuole accedere alla linea rossa o la linea la Victoria Line o..e la direzione che vuole scegliere. Questo è molto importante. C'è un annuncio che dice eh di di stare a destra. Una volta arrivati sul binario bisogna eh camminare lungo il binario e andando verso la fine del binario è più probabile trovare posto e oltretutto bis- quando arriva il eh treno bisogna lasciare scendere le persone prima di salire. Poi, una volta, saliti sul treno si ti puoi sedere se si trova il posto ed è sempre meglio entrare nel eh vagone piuttosto che rimanere sulla porta. E anche importante eh eh dare il proprio posto eh a persone che ne hanno bisogno come persone anziane e a questo punto si spera che la persona sia arrivata al a destinazione.*

### Post-Interpreting Think-Aloud Protocol

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq21: Yeah. I knew I was terrible! It is very difficult.

AM: Do you think that this kind of activity would get easier with practice?



Seq21: Yes, definitely.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq21: I felt frustrated.

## Seq22

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Seq22: I would not say my languages are stored in different parts of brain but maybe in different parts of my language 'box' or memory. What it seems to feel like is that I am accessing two P\*\*\*\*s or identities, which were built in different places and times in my life. [\*\*Participant states his name in the plural]

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq22: I think the maths will certainly distract me! I get quite distracted. This is something I don't normally do, although I have dabbled in it. It's usually something you're doing in person so there are turns. Doing it like this where there are no turns and you have information coming at you is quite strange. I think into English is going to be more comfortable, probably because you do that kind of informally when you're in another country anyway. You may translate for a friend or family member, which happened to me for 10 years. You find yourself at a meal with a whole table full of Italians all going at each other and your English speaking friends want to know what's happening! Usually you're doing interpreting in conversational terms so this is quite difficult. It's quite different. I think it be easier into English but time will tell.

AM: Do you think there are any aspects that you might struggle with?

Seq22: I'd say there be a certain amount of confusion. I'm not great at maths anyway. I wouldn't be able to identify what I would particularly struggle with or be particularly good at. Certainly the Lexus or the vocabulary, even without the maths. In the warmup I was missing certain words they were taking the time coming and you're not able to interpret *al.l* of the information: your selecting. You have to listen for a while and work out what the main point is in each segment before you speak. I imagine the maths going to seriously damage my performance!

AM: How are you feeling before you start the activity?

Seq22: I'm feeling slightly nervous because in my head it's a test and you're out of your comfort zone, even if it is a laboratory situation. It's not like I'm extremely nervous! I'm also curious to see how I get on and there's some excitement and enthusiasm in there too!

### [Simultaneous interpreting from Italian into English occurs]

*Okay he's going to talk about young people and the social networks. 50% of kids that are using social media are talking about high-risk eh eh behaviour. A study of 500 kids of 18 years age. 40% of the discourse was about the use of drugs and alcohol. 40% talked about sexual activities and 14% talk about violent behaviour. In sport sites in other sites they don't discuss high-risk.. Ok so the researchers informed the authorities and the authorities have sent eh some warnings to people who are talking about high-risk behaviour and the 18-year-olds were informed about the risks of this type of eh communications and behaviour online. All those that have received these warnings from the police have eliminated information from their profiles or their threads...high-risk behaviour. So eh he's summing up the what we can eh understand from this is this type of behaviour is probably always going on on the social media. It's just reflecting that... he's saying that these ideas are just being eh are pr- present in the real world and are just repropounded online. That's what the the research is saying.*

### [Simultaneous interpreting from English into Italian occurs]

*Ok parla dell'etichetta del eh [laughs] comportamento sul eh Tube di Londra. Ci sono tante cose da vedere a Londra ma la domanda è come arrivarci? I tassi sono espensivi costosi e la bici non è sicuro. Dice che il meglio modo è il metro. Dice che il comportamento sul metro è molto importante per navigare il sistema. Deve avere il biglietto pronto eh e non deve fare*

*aspettare la coda davanti alla barriera. Mmm dice che deve conoscere il la il colore della linea prima di di andare e deve parlare sulla sinistra del eh del [laughs] non deve stare all'entrata del eh del eh binario: è meglio andare in fondo. Più facile entrare nel treno così. Una volta arrivato il treno eh deve ritirarsi e lasciare uscire la gente del treno. Questo è molto importante che può creare molta tensione. Mm eh se puoi trovare una sedia va bene ma e meglio andare in fondo se non c'è una sedia e lasciare spazio per entrare la gente e naturalmente ci si sono eh disabili o eh dei vecchietti lasciare spazio a loro. Alla fine, arriva alla dest- destinazione senza problemi. Hai finito il viaggio.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq22: I think it pretty much followed what I imagined was going to happen, yes. Italian was more difficult. There were certain words that I have that are buried but weren't coming out. *Scala mobile!!* There were two things happening. One was positive: because I knew the content I was able to kind of not listen as much and put together phrases more or less about where he was saying them. On the other side, the maths definitely impacted on my performance. I would say seriously. There were two things happening there.

AM: Do you think that this kind of activity would get easier with practice?

Seq22: I would say yes but I would qualify it by saying that it would depend on the domain of language you would be working in. I imagine interpreters specialise more in certain areas because there are certain things that you would want to be fairly bilingual in to do. I would imagine you would get better at it but it would take practice and probably a fair amount of practice!

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq22: Well, you become absorbed in it, especially with the maths. Actually, I'd like to go back and have a look at that! I suppose your nerves are more focused into the activity. It's an extremely strange sort of thing to be doing on a Thursday afternoon: writing numbers and translating at the same time! It pretty much panned out the way I thought it would. There are reasonable levels of adrenaline pushing you and you can feel it.

## Seq23

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Seq23: I was 17 when I started learning English. I was sent to the United States for a language exchange and I had no English before that. I did German at school but I was very bad at languages. I would say that Italian is my dominant language; I speak more often Italian. I work half-and-half in English and Italian but perhaps slightly more in Italian than in English. It's a continuous switch from one to the other.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq23: I have no idea. From the warm-up, I think I might be better translating from Italian to English, I guess. We'll find out soon!

AM: Do you think there are any aspects that you might struggle with?

Seq23: Well, the other way around! I'll have to try to find the words in Italian because I will probably have many in mind. The comprehension is already there. Previously, the struggle had been to learn English so once you have acquired that you don't worry about it anymore so you don't need to translate because it's already been done. English is already there and I don't need to translate it. I tend not to translate anything because somebody else does it for me and I then check it. That's not even really interpreting; that's more translation.

AM: How are you feeling before you start the activity?

Seq23: Surprised! I never thought I would panic with translation. Not panic! I feel uneasy about interpreting from English into Italian and I never expected that. The other way around felt controllable and manageable.

#### [Simultaneous interpreting from Italian into English occurs]

*My name is Giovanni Sellicci and now I'll talk about the young and the social networks. It seems that from some uh from some researches it is clear that more than one half of the people that use My Face or discuss uh difficult topics so topics uh almost to limit of legalit-. It is a matter of studies some conducted by people specialise in the subject. One study considered the profiles of about 500 of 500 people of 18-year-old. In 41% of the cases uh social networks were used to exchange information on the use of drugs and uh addictions and uh in other cases people talked about uh sexual behaviour and 14% people discussed and had chats based on violence. It has been uh noticed that among engaged in other activities, like sports or ch- church groups, there was a a less strong tendency to discuss these uh topics. Another study it was concerned with uh 185 profiles about uh uh dangerous attitudes. The researchers communicated these results to the authorities and one half of the profiles received a message uh telling them that would invite them to change their profile and uh change the information. People were young people were also informed about the risk of uh the exchange of uh personal information with people unknown met on the net. Of course, all these most all the people who received this information modified their profiles and eliminated the information connected with the use of alcohol and and uh substances and sexual behaviour. What can we deduce from all this? I would say that it is a situation in which behaviours that have always happened in the among the young would found the way to appear and to come to the surface because of social networks. People have always discussed topics which were forbidden, especially when they were in groups far away from the control of the adults. The net simply creates groups that are virtual and where these behaviours where there is a sharing of information i- are proposed in a more natural way.*

#### [Simultaneous interpreting from English into Italian occurs]

*Buongiorno, il mio nome è Petty e sono eh inglese e adesso vi parlerò un po' dell'etichetta da tenere nella metropolitana di Londra. Immagino che molti di voi abbiano visitato Londra negli ultimi anni e hanno visitato posti famosi come Big Ben, London Bridge. Ci sono molti posti da vedere in Londra ma questione non è come ci si arriva in questi posti? La città di Londra è notoriamente molto costosa. È possibile naturalmente prendere un taxi ma è costoso ma forse c'è anche il eh andare in bicicletta ma può essere pericoloso e quindi molte persone prendono la metropolitana. Queste persone considera- che la il cambi- il lo scambio sociale e il e gli obblighi sociali che sono implicati nel andare nella metropolitana di Londra che sono estremamente importante. Quindi le cose che dovete ricordare sono alcune importante. Quando arrivate eh alla metropolitana dovete già avere il vostro biglietto perché le persone si affretteranno a a raggiungere il loro posto sulla metropolitana. Quando - una volta attraversata il eh la barriera che vi separa dalla metropolitana - dovete senza subito muovervi nella direzione giusta. Dovete sapere quale colore prendere che vi dirà anche la direzione che dovete prendere e poi dovete arrivare al alla eh all scale mobili. Attenzione! Dovete seguire la stessa dirittura che seguono le altre persone che molte le persone possono magari affollarsi vicino all'entrata e questo può dar fastidio a molte persone. In particolare, se andate se scendete lungo la scala mobile dovete trovare la vostra posizione rapidamente. Ricordatevi quando il le porte si aprono di rimanere indietro e di fare in modo che la gente che devo uscire abbia spazio per farlo e poi una volta entrati nella metropolitana potete state eh occupate subito un posto subito seduto se potete o altrimenti state in piedi guar- eh mettendovi nella posizione giusta per non intralciare le posizioni degli altri. Att- ovviamente, se ci sono persone - donne incinte o persone eh anziane che hanno diritto a sedersi - date loro il posto. Questo e parte delle aspettative sociali e a quel punto potrete godervi il resto del vostro viaggio.*

### **Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq23: I had already experienced it sometimes when I had to interpret for emergencies and I always preferred to do it from Italian to English rather than the other way round but I always thought it was because people made things easier for me. I don't know if I found it easier because of the help of thoughtful Italians. The English into Italian here was, in fact, easier. The maths distressed me and I hated it!

AM: Do you think that this kind of activity would get easier with practice?

Seq23: I think so. It might be very interesting, in fact. I think I'm ready to retire now so unless it's very highly paid...!

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq23: The numbers made me feel stressed.

## Seq24

### Pre- interpreting Think-Aloud Protocol

AM: Now that you've got an idea of what simultaneous interpreting entails, I've got several questions for you:

First, do you feel your languages are stored in a particular way in your mind and how do you access them?

Seq24: I think languages - or language skills - are stored in the same place in our mind, but the difference is in the way they behave in different situations, states of mind, environments, interaction with others, etc. Also, it's important how we use them or decide to use them (spontaneous or controlled speech or thought, spoken or written, formal and informal, etc). It would be interesting to explore – from a neurological point of view – the difference between spontaneous / unconscious production (i.e. during dreaming or a specific emotional status) and conscious/controlled production of a text (either oral or written, as in a formal conversation, an exam or at work). Sometimes I find myself thinking or speaking in English regardless of the place or situation I'm in. The mutual interaction between culture and language is also important as through different languages we have access to different views of the world. A language can determine the way we perceive and experience life.

AM: Is there anything you think you'll be particularly good at? Examples of this include working into a certain language, listening and speaking at the same time, concentrating and splitting your attention in order to also be able to do the maths.

Seq24: This is all new for me. I'm working in English and Italian at the moment and I would consider it Italian to be my dominant language. At home I speak Italian and in the office I speak both. With the general public I speak English and with my colleagues I speak Italian so it's a mix. I swap into and out of languages all day. If there are not a lot of people coming in I will speak Italian. So, I don't know which direction I will be better at.

AM: Do you think there are any aspects that you might struggle with?

Seq24: If they speak too fast because it tends to make me overthink because I want to say things correctly. Even outside of languages, sometimes I have problems thinking of the right word, even in Italian, so I don't know if it's just the ageing process! We can only try and see what happens!

AM: How are you feeling before you start the activity?

Seq24: I feel OK. I'm not nervous but I am curious. I'm very curious! I like this kind of thing, even though I've never interpreted.

### [Simultaneous interpreting from Italian into English occurs]

*My name is Giovanni Sallicci and now I will do a speech about y- youth and networks social network. It seems that from some researches it seems that eh more than half of the youth using s- MySpace and Facebook discuss of the behaviours eh high-risk behaviour or limits of legality. Its official studies eh made by pedreticians specialised me- me- eh doctor and eh specialised in the adolescence. They took the profile of 500 young- youngs, random choosely choosen. In most cases the net social network was used to exchange information of use of drug and alcohol. On the 24% of cases eh young people will discuss of eh sexual behaviour and the other well were talking about chat on eh violent behaviour. It's been found that people eh eh doing sports and small religion behaviour behave at risk. 190 profiles were found with ri- eh behaviour risk behaviour [laughs]. Researchers communicated these results to the community. Half of the profiles received a warning eh message, inviting to modify the profile and eliminate information eh incriminated information. Young people were sensibilised eh about risks involved in eh information exchange with unknown people, where you can eh who can find in the net. Almost all the young receiving the warning email modified their profiles, in particular eliminating eh the information related to alcohol and drugs abuse and s- and sexual behaviour. What can we eh take from that? It's a situation where behaviour were which were always which always happened in eh social contacts in the young generation found the possibility of expression*

*through the net and social network. Eh young people always discuss about prohibited eh topics when they are in a group far from the indiscret- indiscrete presence of the adults. The net simply eh creates some virtual groups where these behaviours of sharing information are happening again eh naturally.*

**[Simultaneous interpreting from English into Italian occurs]**

*Hello! Mi chiamo eh Peter Hughes, m- sono inglese. Vi parlerò oggi della etichetta nella metropolitana. Comincerò il mio discorso do- eh ora. Immagino che molti di voi avranno visitato Londra negli ultimi anni per visitare i posti turistici: Buckingham Palace, Big Ben, il eh Ponte di Londra...queste cose eh che fai a Londra di solito. Il problema è come andare in questi posti? Londra è conosciuta come una città molto costosa, i taxi non sono proponibili e la metropolitana è il modo eh sicuro per andare in giro. I britannici sono eh sconosciuti come strambi e educati [laughs] cittadini e c'e e e molto importante sapere come andare in giro con la metropolitana. Dovresti riman- eh ricordare questi eh punti importanti: dovete avere il biglietto pronto quando siete alla barra e non fermare le code. Quando avete attraversato le barriere dovete guardare in quale direzione andare: la la linea blu per Piccadilly, per Victoria. Dovete sapere in quale linea prendere, in che direzione. Poi arriverete alla scala. E molto importante. Dovete stare al destra camminare a destra. Quando arrivate alla ai binari dovete scendere e molti perché molti si affollano davanti all'entrata e poi essere stressante per molte persone. Eh in questo modo è più facile trovare la giusta metropolitana linea. Ricordate di stare dietro prima di salire sul treno. È molto importante perché può creare molta attenzione per molte persone. Una volta sopra potete sedervi se trovate un sedile e non state davanti alla porta. Ci sono delle dei sedili prioritari vicino alle porte e cedete il vostro la vostra sedie a qualcuno che potrebbe averne bisogno, come i disabili o persone anziane. E una è una regola sociale che eh bisogna osservare sulla metro. E potete arrivare tranquillamente alla destinazione. Grazie.*

**Post-Interpreting Think-Aloud Protocol**

AM: Now that you've finished, did the experience match your expectations in terms of what you thought you'd find easiest and what you thought you'd find hardest?

Seq24: Yes, more or less. I think it was harder with the numbers. I'm not sure if I find it easier into Italian or into English. It was almost the same because it the speeches were quite easy in both languages. The second time in Italian it was easier. I would expect that English into Italian would be easier for me. I think they were more or less the same, though. I felt comfortable into English as well, which is good. I did find the maths distracting and I was a bit stuck with the numbers. I thought I would do better with numbers but I was thinking about the calculations and I was distracted, obviously. It wasn't so stressful that I stopped. If I had to choose between the two I would go back to the interpreting because I thought the maths was less important so I was more concentrated on the interpreting.

AM: Do you think that this kind of activity would get easier with practice?

Seq24: Definitely, yes.

AM: Did you feel any differently during the interpreting compared to how you felt beforehand?

Seq24: It was not stressful. I did feel that I had to deliver but it wasn't stressful. I was quite relaxed because I was enjoying it!