

**"That bloody [r]!": Exploring Variation, Variability Constraints
and Indexical Meanings of Non-Prevocalic /r/ Realisations in L2
English of Polish Migrants in the South of England.**

Thesis submitted for the degree of Doctor of Philosophy

**Department of English Language and Applied Linguistics
School of Literature and Languages, University of Reading**

Jan Trębacz

June 2022

Thesis submitted for the degree of Doctor of Philosophy

"That bloody [r]!": Exploring Variation, Variability Constraints and Indexical Meanings of Non-Prevocalic /r/ Realisations in L2 English of Polish Migrants in the South of England.

Jan Trębacz

Department of English Language
and Applied Linguistics

supervisors:

Dr Sylvia Jaworska

Prof. Jane Setter

words 78, 946

01st June 2022

Declaration

I, Jan Trębacz, confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

June, 2022.

Abstract

One salient feature that has been associated with the L2 English of Polish migrants, the largest linguistic minority in the UK (Census, 2011), is the way they pronounce /r/. Szypra-Kozłowska (2018) and Waniek-Klimczak & Matysiak (2016) suggest the potential social function of /r/ in Polish-accented English as a higher-level indexical (Johnstone & Kiesling, 2008; Labov, 1972; Silverstein, 2003); nonetheless, very little research on variable rhoticity and non-prevocalic /r/ realisations had been done in the context of L2 English of Polish migrants in the south of England. This study attempted to address this gap by providing further evidence for variable rhoticity, investigating /r/ variants employed by these speakers and exploring the various factors that impact their choices, focusing on SLA-related, phonological and social constraints. Participants' beliefs regarding indexical meanings linked to the variable were also examined. Both quantitative and qualitative data were collected from 26 participants. Questionnaires, semi-structured interviews and a sociolinguistic interview in English were employed. 6,955 tokens, i.e. words with non-prevocalic /r/, were elicited, coded using auditory analysis and visual inspection of spectrogram, analysed in SPSS and contextualised using qualitative data.

The results confirm variability in rhoticity and non-prevocalic /r/, the most-frequently employed variant being approximants (57% of all tokens), followed by non-rhotic realisations (38.7%). Evidence of taps/tap-like variants and idiosyncratic realisations was also found. A small percentage of trills was only identified in Word List data. A number of statistically-significant SLA-related and social variables were found, including Formal Instruction in English in Poland, Grammatical Range & Accuracy, Self-estimated Level of English and Social Grade. Two strongest predictors discouraging non-rhoticity were NORTH and NEAR vowels. The presence of style shifts was also identified. In addition, ample evidence for meta-discourse regarding /r/ variants was found. [r] and [r̥] were found to be frequently linked to second-order indexical meanings, signalling alignment with Poland, the notion of foreignness, a lack of willingness to integrate into the British society or a specific brand of "Polishness" represented by the commonly-reported stereotype of Polish-thug-in-a-track-suit. By examining variability in /r/ realisations and its origins, the current study has made a contribution to the body of knowledge regarding rhoticity in Polish-accented English as well as the wider field of sociophonetics, warranting the need for further investigation of the variable in the context of out-group stereotypes and the attached stigma and accent bias.

List of Keywords

Polish-accented English, foreign accent, accent bias, migration, variable rhoticity, rhotics, variability, internal variability constraints, external variability constraints, socially-conditioned variation, post-vocalic /r/, non-prevocalic /r/, trills, taps, approximants, indexicality, indexical meanings, stereotypes, Polish migrants, England, UK.

Table of Contents

Declaration.....	2
Abstract.....	3
List of Keywords.....	4
Table of Contents.....	5
List of Tables	13
List of Figures	15
Acknowledgements.....	16
Chapter 1 Introduction.....	17
1.1 Personal Motivation	17
1.2 Background	18
1.3 Rationale and Research Aims	20
1.4 Overview of the Thesis	22
Chapter 2 Literature Review.....	23
2.1 Rhoticity.....	23
2.1.1 Definition of Rhoticity.....	24
2.1.2 A Brief History of Non-Rhoticity.....	24
2.1.3 Rhoticity and Phonotactics	25
2.1.3.1 Pre-vocalic /r/.....	25
2.1.3.2 Post-vocalic /r/	26
2.1.4 /r/ Sandhi: Linking and Intrusive /r/.....	27
2.1.4.1 Social and Stylistical Variation in /r/ Sandhi	28
2.1.4.2 Linguistic Variability Constraints in /r/ Sandhi	30
2.1.4.2.1 Factors Affecting the Use of Linking /r/	30
2.1.4.2.2 Factors Affecting the Use of Intrusive /r/	31
2.1.5 Rhoticity in England	32
2.1.5.1 Rhoticity in Berkshire and Reading.....	33

2.1.6	Rhoticity in Polish and Polish-accented English	36
2.1.6.1	Constraints on Rhoticity in L2 English of Polish Speakers	37
2.1.7	Summary and Related Research Questions	39
2.2	Rhotics.....	40
2.2.1	Rhotics – Definition and Class Membership	40
2.2.2	Types of Rhotics	42
2.2.2.1	Trills.....	43
2.2.2.1.1	Acoustic Description of Trills.....	44
2.2.2.2	Taps and Flaps	45
2.2.2.2.1	Acoustic Description of Taps and Flaps	46
2.2.2.3	Fricatives and Approximants	46
2.2.2.3.1	Acoustic Description of Fricatives.....	47
2.2.2.3.2	Acoustic Description of Approximants.....	48
2.2.3	Variation in /r/ realisations in English	51
2.2.3.1	British English	52
2.2.3.1.1	The “Standard” Variety of British English	52
2.2.3.1.2	The Accent of the Home Counties Modern Dialect Area	53
2.2.3.2	/r/ Variants in English Accents in England	54
2.2.3.2.1	Post-alveolar Approximant	54
2.2.3.2.2	Retroflex Approximant	55
2.2.3.2.3	Alveolar Tap	55
2.2.3.2.4	Alveolar Trill.....	55
2.2.3.2.5	Labiodental Approximant	56
2.2.3.2.6	Bunched /r/.....	58
2.2.3.2.7	Uvular /r/.....	59
2.2.3.3	American English.....	60
2.2.3.3.1	/r/ Variants in American English.....	61
2.2.3.3.2	Internal Variability Constraints on /r/ realiations in American English.....	64
2.2.3.3.3	The Issue of Regional Distribution	66
2.2.3.3.4	The Issue of Perceptual and Acoustic (In)distinctness.....	67
2.2.4	Phonetic /r/ Variation in Polish and Polish-accented English	69
2.2.4.1	Polish.....	69
2.2.4.1.1	The Polish Rhotic: the Trill versus Tap Debate	71

2.2.4.1.2	Evidence of Social Stratification.....	74
2.2.4.1.3	Other Polish /r/ Realisations: Fricatives and Approximants	74
2.2.4.2	Polish-accented English	75
2.2.5	Summary and Related Research Questions	77
2.3	Accent and SLA-related Factors	81
2.3.1	Age of Onset, L2 Instruction and Phonetic Training.....	82
2.3.2	Length of Residence and L2 Input.....	83
2.3.3	Motivation, Attitudes to Learning, Anxiety.....	84
2.3.4	Summary and Related Research Questions	86
2.4	Indexicality, Rhoticity and Rhotics.....	87
2.4.1	Denotative, Pragmatic and Social Meaning.....	87
2.4.2	Indexicality	87
2.4.3	/r/ as a Sociolinguistic Variable	91
2.4.3.1	/r/ as a Social Marker in the L1 Context	91
2.4.3.2	r/ as a Social Marker in the Bilingual Context	92
2.4.4	Related Research Questions:.....	94
2.5	Chapter Summary and Research Questions	94
Chapter 3	Methodology	96
3.1	Design.....	96
3.2	The Population	96
3.3	Sampling Methods.....	96
3.4	The Sample.....	97
3.4.1	Age.....	98
3.4.2	Gender.....	98
3.4.3	Education	98
3.4.4	Socio-Economic Status	99
3.4.5	Other Factors.....	100
3.5	Materials and Procedures	100

3.5.1	Semi-structured Interview	103
3.5.2	The Questionnaire	106
3.5.3	Social Networks and Language Use Interview	107
3.5.4	Linguistic Data.....	108
3.5.4.1	Free Speech Elicitation Task.....	109
3.5.4.2	The Word List Task	109
3.5.4.2.1	Stressed, Open Syllables ('V(r) and 'CV(r)).....	111
3.5.4.2.2	Unstressed, Open Syllables (CV(r)).....	112
3.5.4.2.3	Stressed, Closed Syllables (' CV(r)C)	112
3.5.4.2.4	Unstressed, Closed Syllables (CV(r)C).....	113
3.5.4.2.5	Priming.....	113
3.5.4.3	Reading Passage.....	115
3.6	Preliminary Analysis and Coding	116
3.6.1	Linguistic Data.....	116
3.6.1.1	Free speech – Level of English	116
3.6.1.2	Free Speech Transcription	117
3.6.1.3	Preparing Speech Data for Auditory Analysis	119
3.6.1.4	Auditory Analysis	120
3.6.1.4.1	The Categories for Auditory Analysis	120
3.6.1.4.2	Approach and Challenges to Auditory Analysis.....	123
3.6.1.5	Acoustic Analysis	127
3.6.2	Semi-structured Interview Data Analysis	129
3.6.2.1	Socio-Economic Status	129
3.6.2.2	Qualitative Data Analysis	130
3.6.3	Questionnaire Data Coding.....	131
3.6.4	Social Networks and Language Use Data Coding and Analysis	132
3.7	Statistical Analysis	133
3.7.1	Interrater Reliability.....	133
3.7.2	Main Statistical Analysis	134
3.7.2.1	Observation Unit: Participants.....	134
3.7.2.1.1	Dependent Variables	134
3.7.2.1.2	Independent Variables.....	136

3.7.2.2	Observation Unit: Words	139
3.7.2.2.1	Dependent Variables	140
3.7.2.2.2	Independent Variables.....	140
3.7.2.3	Effect of Preceding /r/ Quality	143
3.8	Ethical Procedures.....	144
Chapter 4	Results and Discussion	146
4.1	Intrusive /r/	146
4.2	/r/-fullness Indices and Stylistic Shifts.....	147
4.2.1	AA Total /r/-fullness Index.....	147
4.2.2	Word List and Free Speech /r/-fullness Indices.....	149
4.2.3	Style Shifts	150
4.2.4	The Direction Of Style Shifts	151
4.2.5	Section Summary	154
4.3	Phonetic Variability in /r/ Realisations	155
4.3.1	The Usage of Categories in AA Total Data Set.....	155
4.3.2	The Usage of Categories in The Word List and The Free Speech Data.	158
4.3.3	Phonetic Variability in /r/ Realisations: Discussion	159
4.3.4	Impressionistically “Weak” Rhoticity	160
4.3.5	The Usage of Categories for Individual Participants.....	162
4.3.6	Section Summary	167
4.4	Acquisitional, Attitudinal and Social Constraints on Non-prevocalic /r/ Realisations	168
4.4.1	Acquisitional Factors	169
4.4.1.1	Age-Related Factors and English-Language Instruction	169
4.4.1.1.1	Age.....	169
4.4.1.1.2	Age of Onset (of Learning English).....	169
4.4.1.1.3	Formal Instruction in English in Poland	169
4.4.1.1.4	Amount of English Language Instruction	170
4.4.1.1.5	Section Summary and Discussion.....	170
4.4.1.2	Level of English.....	171

4.4.1.2.1	IELTS Scores	171
4.4.1.2.2	Self-estimated Level of English	173
4.4.1.2.3	Section Summary and Discussion.....	173
4.4.1.3	Exposure to English	174
4.4.1.3.1	Estimated English Use	174
4.4.1.3.2	Education in the Target Country	175
4.4.1.3.3	Length of Residence (LoR).....	175
4.4.1.3.4	Section Summary and Discussion.....	176
4.4.1.4	Phonetic Training.....	177
4.4.2	Attitudinal Factors	179
4.4.3	Social Factors.....	180
4.4.3.1	Gender.....	180
4.4.3.2	Ties with Poland.....	181
4.4.3.3	English Use Index and Social Grade.....	182
4.4.3.3.1	English Use Index	182
4.4.3.3.2	Social Grade.....	184
4.4.4	Section Summary	184
4.5	Internal Constraints on Rhoticity and Non-prevocalic /r/ Realisations.....	185
4.5.1	Results.....	186
4.5.1.1	The Use of Category One Tokens.....	186
4.5.1.2	The Use of Category Two Tokens	187
4.5.1.3	The Use of Category Three Tokens	189
4.5.2	Discussion of Internal Constraints	190
4.5.2.1	Preceding Vowels	190
4.5.2.2	Coda Type.....	193
4.5.2.3	Onset (Preceding Consonants).....	194
4.5.2.4	Priming.....	195
4.5.2.5	Section Summary	199
4.6	Indexicality and /r/ Realisations.....	200
4.6.1	Accent as a Cue to Recognising Polish Migrants	200
4.6.2	Beliefs Regarding Features of Polish-accented English	203
4.6.3	Beliefs Regarding /r/ Variants as a Feature of Polish-accented English	204

4.6.4	“Polish to the bone” and “I don’t always need to be this ‘Marrrczak’”: Indexical Meanings of /r/ in Polish-accented English	207
4.6.4.1	First-order Indexicality	207
4.6.4.2	Second- And Third-Order Indexical Meanings: Being from Poland, Alignment with Poland, Foreignness	208
4.6.4.3	A “Square” Accent of “Square” People - Thugs and Aggressiveness as Examples of Negative In-group Stereotypes of Polish Migrants.....	212
4.6.5	Section Summary and Discussion.....	215
Chapter 5	Summary and Conclusions	218
5.1	Summary of Research Findings	219
5.1.1	Research Question 1: Is the L2 English of Polish migrants consistently rhotic, non-non rhotic, or variably rhotic?	219
5.1.2	Research Questions 2 and 2a: Do Polish migrants use intrusive /r/? If so, what are the internal constraints on variability in the use of intrusive /r/?.....	220
5.1.3	Research Question 3: Are Polish migrants living in the UK consistent in terms of their choice of non-prevocalic English /r/ realisations, or are they variable?	220
5.1.4	Research Questions 1a and 3a: What are the internal constraints on variability in the use of rhotic and non-rhotic variants? Are there any phonetic constraints on variability in /r/ realisations?	221
5.1.5	Research Question 3b: Which acquisitional variables have an impact on variability in /r/ realisations?	222
5.1.6	Research Question 3c: Are there any social constraints on variability in /r/ realisations?.....	222
5.1.7	Research Question 3d: What is the main non-prevocalic /r/ realisation in L2 English speech of Polish migrants living in the UK?	223
5.1.8	Research Questions 4 and 4a: Is there any evidence of stylistic stratification, i.e. style shifts, in the use of /r/ realisations in Polish-accented English of Polish migrants living in the south of England. What is the direction of those style shifts?.....	223
5.1.9	Research Question 5 and 5a: Is there any evidence of higher-order indexical function linked to rhoticity or /r/ realisations in Polish-accented English of Polish migrants living in the south of England? What are the indexical meanings linked to the	

non-prevocalic /r/ in Polish-accented English of Polish migrants living in the south of England?	224
5.2 Research Limitations and Suggestions for Further Research.....	225
5.3 Final thoughts	228
List of References	231
Appendices.....	243
Appendix I: Data Collection Tools	243
Appendix II: Free Speech Data.....	257
Appendix III: Semi-Structured Interview Data.....	343
Appendix IV: Quantitative Data Analysis Results	393
Section 01 Participant Details	393
Section 02 Reliability Ratings	395
Section 03 Percentages of Tokens per Participants in Each Category of /r/-variants in Data Sets	398
Section 04 Style Shifts	401
Section 05 Correlation Coefficients for Categories 1-4 In the AATotal Data Set.....	402
Section 06 Observation Unit: Participants	403
Section 07 Observation Unit: Words	463
Section 08 Priming.....	475

List of Tables

Table 1	<i>The Structure of Data Collection Sessions</i>	102
Table 2	<i>Categories Employed for Auditory Analysis</i>	123
Table 3	<i>Demographic Classifications in the UK and the ABCI Grades</i>	130
Table 4	<i>Scoring of the Positively-Keyed Questionnaire Scales</i>	131
Table 5	<i>Scoring of the Negatively-Keyed Questionnaire Scales</i>	132
Table 6	<i>Dependent Variables Employed in the Observation Unit: Participants Part of Analysis</i>	135
Table 7	<i>Independent Variables Employed in the Observation Unit: Participants Part of Analysis</i>	137
Table 8	<i>Dependent Variables Employed in the Observation Unit: Words Part of Analysis</i>	140
Table 9	<i>Independent Variables Employed in the Observation Unit: Words Part of Analysis</i>	141
Table 10	<i>The Two Models and the Independent Variables They Comprised</i>	142
Table 11	<i>Total /r/-Fullness Index Based on all the Tokens, Arranged From the Lowest to the Highest Value</i>	148
Table 12	<i>AAWL /r/-Fullness and AAFS /r/-Fullness Index Values for Individual Participants; Arranged From Lowest to Highest</i>	149
Table 13	<i>A Comparison of the Word List and Free Speech /r/-Fullness Indices</i>	150
Table 14	<i>The Results of the Paired-Samples T Test for AAWL and AAFS</i>	150
Table 15	<i>Individual Values for AAWL and AAFS /r/-Fullness Indices</i>	152
Table 16	<i>Participant Mean IELTS Scores (not Including Pronunciation)</i>	153
Table 17	<i>Categories Employed in the Current Study for Coding Language Data</i>	155
Table 18	<i>Percentages of Each Category of Tokens per Individual Participant in the AATotal Data Set</i>	162
Table 19	<i>Spearman's Rho Correlation Coefficients for Categories 1-4 in the AATotal Data Set</i>	165
Table 20	<i>Participants' Individual and Overall IELTS Scores Organised by Level</i>	172
Table 21	<i>Statistically Significant Pearson's Correlation Coefficients for the Dependent Variable IELTS Grammatical Range & Accuracy</i>	173
Table 22	<i>Categories for Onset Employed in the Study</i>	194

Table 23 *Spearman's Rho Correlation Coefficients for the Preceding /r/ and the Following Non-Prevocalic /r/*196

Table 24 *Participants' Comments Regarding /r/ Realisations in Polish Speakers' L2 English*204

List of Figures

Figure 1	<i>A Map of Modern Non-Standard Dialects Showing Rhotic Areas</i>	35
Figure 2	<i>Rhotics in the Classification of the IPA</i>	43
Figure 3	<i>A Waveform Image of a Voiced Alveolar Trill</i>	44
Figure 4	<i>A Spectrogram of the Spanish Word "Perro"</i>	45
Figure 5	<i>A Spectrogram of the Spanish Word "Pero"</i>	46
Figure 6	<i>A Spectrogram of the Polish Word "Kawalera" ("Bachelor's")</i>	48
Figure 7	<i>A Spectrogram of "Read"</i>	49
Figure 8	<i>Main tongue Shapes for American English and British English /r/</i>	62
Figure 9	<i>Approximant Rhotic in the Polish Word "Karol" ("Charles")</i>	75
Figure 10	<i>A Waveform/Spectrogram of the Word "Lurker"</i>	125
Figure 11	<i>A Waveform/Spectrogram of the Word "Modern"</i>	126
Figure 12	<i>Total /R/-Fullness Index Presented on a Histogram</i>	148
Figure 13	<i>Percentage of Tokens in Each Category in the Data Set</i>	156
Figure 14	<i>Distribution of Tokens in the WL and FS Data Sets Respectively</i>	158
Figure 15	<i>Percentage of Tokens in Each Category for Individual Participants (AATotal)</i> .	167
Figure 16	<i>AATotal /r/-Fullness Index per Participant</i>	178
Figure 17	<i>A Simple Histogram of English Use Index Values Among the Participants</i> .	183

Acknowledgements

I would like to thank the following individuals and institutions:

My mother, Teresa Kamińska-Trębacz for her endless support. Both my supervisors for all their support they have given me: prof. Jane Setter for encouraging me to take a dive and embark on this perilous journey into the unknown and Dr Sylvia Jaworska for making sure I got to my destination safely. My fantastic PhD Directors of Studies, Dr Jacqueline Laws and Parvaneh Tavakoli, who have always been there for me when I needed them. Ciaran for his help with interview transcriptions and his constant support. The amazing Paul Carley for his contribution as an inter-rater and all his advice. Nataly, Carl and Lynne for their invaluable help assessing my participants' level of English. All my generous, brave participants for sharing their stories and offering their time to help me in my research – you were the reason I kept going. Szymon Szumiał for his invaluable input on my statistical analysis. All the staff members and colleagues at the International Study and Language Institute and the Department of English Language and Applied Linguistics at the University of Reading. All the colleagues at DCAD at University of Durham. All the staff at Graduate School. All the fellow PhD students at Reading, especially Winai and Natalia. Dr Linda Shockey for her friendship, expert advice and support. Dr Joanna Przedlacka for all the advice, encouragement, and chats just when I needed them the most. Dr Geoff Lindsey for inspiration and sharing his passion for English phonetics. Prof. Devyani Sharma and Dr Rob Drummond for inspiration. Ron Paterson & Reading Scottish Pipe Band for the gift of music and a sense of belonging. My family and friends, who, in one way or another, accompanied me on that journey. All the pre-sessional EAP students as well all the undergraduate students that I have had the privilege to teach and learn from at Reading and Durham.

The Hanna and Zdzislaw Broncel Charitable Trust for offering me a research grant to cover a year of my student fees.

Chapter 1 Introduction

1.1 Personal Motivation

My six-years-long experience as an English pronunciation teacher working with prospective teachers of English as a foreign language in a teacher training college in Poland left me with many questions, but the one that puzzled me the most was one regarding a tiny segment represented by the letter “r”.

Like many teachers fresh out of university, I started my job full of passion and with a sense of a mission: I was determined to help my students improve their English accent as much as possible, even to the point of sounding “native-like” should they want it... and most of them *did* want that. Some of them could already boast accents that were close to native models before they even started their phonetic training. These students I was able to teach basic phonetic theory, which did not significantly contribute to their already *almost* flawless L2 performance. However, in the majority of cases, my students had relatively strong Polish accents, even if they had lived in an L2 environment before starting the degree, and so mostly needed and welcomed my intervention.

Hour by hour, week by week, we would learn about articulators, English consonants and vowels; we would practice phonemic transcription and various intonation contours. As the time passed, most of my students would get better. Some would get significantly better... except for one thing: variable rhoticity.

The materials we used as a model employed a non-rhotic variety of English: the General British accent. There were always two or three individuals who wanted to master General American instead, but for some reason, the majority wanted to “sound British”: “I want to sound like Hugh Grant!” or “I would love to sound a bit like Emma Watson!” they would say. Normally, after several intensive sessions in a language lab, most of them would get closer to their goals in terms of pronouncing their dental fricatives “correctly”, using the linking sounds, or even producing the “right” quality KIT and FLEECE vowels. However, for some inexplicable reason, very few students ever managed to develop a consistently non-rhotic pronunciation, even despite their reassurance that they were determined to do so.

The non-prevocalic rhotic /r/ would sneak into even the most “British-sounding” performances and come out in all the “wrong” places. Whether in spontaneous conversation or when reading out a list of words, even the most dedicated students would mix up rhotic

and non-rhotic variants, and the habit persisted despite my best efforts to rid them of that cursed /r/. Even those of my students who had spent a few years living in the south of England were “guilty” of variable rhoticity, and what frustrated me the most was that I really was not able to understand what was quite so appealing about the retroflex or bunched up tongue position. Was this the influence of American English? Was this spelling-influenced pronunciation or perhaps a system mapped from Polish? Was this something to do with ease of articulation or the salience of that rhotic approximant?

After I moved to the UK, I noticed the very same phenomenon among my Polish friends and colleagues: variable rhoticity. However, their choices of /r/ variants seemed even more interesting, as alongside /r/-less pronunciations and ones containing approximants, my fellow migrants from Poland did something that would have been considered unthinkable in my practical phonetics class: they also employed more Polish-sounding /r/ variants. Not all Poles made use of all of the variants, and definitely not at all times, but the variability was striking, which posed the question “why”. Why was it the case that the same person could pronounce the same segment in the same sentence in three different ways? For example, the sentence “My car was parked beside yours” could be pronounced as [maɪ 'kɑ: wəz 'pɑ:kt bə'saɪd 'jɔ:ɪz]. More questions arose: “Is this to do with their level of English?”, “Is this due to the phonetic context?”, “Is there some sort of social, indexical meaning assigned to this variable?”.

This thesis is a modest attempt at answering some of those questions that have been haunting me for about a decade: “What /r/ variants do my fellow migrants use the most frequently?”, “What factors govern their choices?”, “Do these choices have any social meaning behind them?”. I sincerely hope that the answers I have found will be of at least half as much interest to others as they have been to me.

1.2 Background

One of the phenomena that has shaped twenty-first century Western Europe is migration: societies which used to be perceived themselves as *relatively* homogenous (e.g. Germany, France, the UK) have been experiencing an accelerated, radical shift towards multiculturalism and multilingualism induced by the growing number of immigrants from Africa, the Caribbean, Asia as well as Central and Eastern Europe. Polish migrants have been a significant part of that change.

Polish immigration to Britain has a long history. Looking back only a hundred years, there seem to have been at least three waves of migrants. Waniek-Klimczak (2009) focuses on two groups: old, “post-war” immigration, which consisted of people who arrived in the UK either during, or shortly after World War II, and the newer, “post-Solidarity” immigration, i.e. people who arrived in Britain seeking political and economic freedom after martial law had been declared in Poland on 13th of December, 1981 (p. 25). More recently, another wave of Poles landed on the British shores. Poland’s joining the European Union on 1st May 2004 led to a new wave of migrants from Central and Eastern Europe. As a direct result of this, Polish became England’s second language according to the National Census (2011). Even though in the time preceding and following the 2016 EU referendum the public discourse on Polish migration in the UK became more hostile (Rzepnikowska, 2019), which made Britain a less welcoming environment for Poles, they are still an important part of UK society.

For the vast majority of migrants, at least a basic level of proficiency in English is indispensable to effectively function in the host country, as their ability to communicate in English has a significant impact on almost every aspect of their lives, be it employment options available, social mobility, status (Trevena et al., 2013) or even their health (Pot et al., 2018). In order to effectively communicate in English, migrants not only need a degree of cultural competence, familiarity with English lexis and grammar, but also at least an adequate command of L2 pronunciation.

As Milroy and Milroy (1999) point out, it is no longer acceptable to discriminate people on the grounds of their social class, race or religion; however it appears that linguistic discrimination is still considered acceptable by many. In particular, speaking with an easily noticeable foreign accent can result in a range of negative consequences for L2 speakers, and migrants, simply due to the reality of living in a foreign country, are particularly likely to experience them. Indeed, Munro (2008) outlines several potential consequences of speaking with a foreign accent, such as negative speaker evaluation, reduced acceptability and reduced intelligibility, which he attributes to the particularly high salience of accents to both native and non-native speakers, as according to him, even phonetically-naïve listeners are often able to recognize speakers from outside their own speech community based on a very limited amount of linguistic input. Indeed, in many cases, having an accent that evokes negative bias can even deprive individuals of life opportunities (Levon et al., 2021).

One such salient feature that has often been associated with Polish-accented English is the way Polish speakers pronounce /r/ in English, which has been stereotyped both in both phonetic course books as well as Western culture. For example, Spiewak and Golebiowska (2001) highlight the use of “a prominent rolled /r/” by Polish speakers of English, while the popular English pronunciation textbook *Ship or Sheep?* mentions word-final “strongly rolled” pronunciations as one of characteristics of Polish-accented English (Baker, 2006). In addition, the belief that Polish speakers of English use taps and/or trills to produce /r/ while speaking English seems to be well-represented in numerous TV and radio programmes. For example, (Szpyra-Kozłowska, 2018) provides an analysis of “fake” Polish accents employed by an international cast in the film *The Zookeeper’s Wife*, and reports that not only did trilled /r/ realisations occur almost as frequently as approximants, but some actors employed almost exclusively trills, which, in her opinion, hinted at a potential indexical function (Eckert, 2008, 2012; Irvine et al., 2009; Johnstone, 2009, 2010; Johnstone et al., 2006; Johnstone & Kiesling, 2008; Labov, 1972; Silverstein, 2003) of /r/ in Polish-accented English.

Nonetheless, relatively recent studies of /r/-realisations in Polish (Coupland & Jaworski, 2009; Gillian & Jaworski, 2014; Jaworski, 2010; Jaworski & Gillian, 2011; Łobacz, 2000; Stolarski, 2013a, 2013b, 2015) demonstrate that contrary to popular belief, the trill is not the dominant /r/ variant in Polish. In addition, the few existing sources on the quality of /r/ in the speech of Polish learners of English based in Poland provide evidence of both variable rhoticity as well as high variation in terms of /r/ variants, with the trill being employed extremely rarely, if at all (Szpyra-Kozłowska, 2018; Szpyra, 2014; Zając & Rojczyk, 2017a, 2017b).

1.3 Rationale and Research Aims

Considering Szpyra-Kozłowska’s (2018) suggestion regarding the status of /r/ as a stereotype associated with Polish-accented English and its potentially important social function in the L2 context, as well as the number of English-speaking Polish migrants in the UK, it is somewhat surprising that, to the researcher’s best knowledge, no research investigating variable rhoticity in Polish immigrants in the UK has been conducted so far, except for a study by Waniek-Klimczak and Matysiak (2016). By focusing on variable rhoticity and variability in non-prevocalic /r/ realisations in L2 English of Polish migrants living in the south of England, as well the various factors that may potentially impact their choices of /r/ variants, this study is hoping to contribute to the relatively small pool of existing knowledge.

It is because of this scarcity of studies focusing on the phenomenon that the current study is largely exploratory in nature, which is reflected in its broad focus. First of all, through auditory analysis as well as supporting acoustic analysis of speech data, the project aims to provide further evidence for variability in the use of /r/ realisations and, subsequently, to identify the dominant /r/ variants employed by the participants. As Zuengler (1991) points out, variability in the context of L2 is often developmental rather than “sociolinguistic” in nature. In other words, it is the result of the speaker’s acquisitional trajectory. Therefore, even though the focus of this study is not on second language acquisition, a decision was made to investigate a range of variables traditionally examined in SLA pronunciation research (Birdsong, 2007; Derwing et al., 2008; Flege, 1988, 2012; Flege et al., 2006; Flege & Fletcher, 1992; Flege & Liu, 2001; Flege et al., 1999; Munro, 2008; Munro & Derwing, 1994; Munro & Derwing, 1995; Thorsten Piske et al., 2001; T. Piske et al., 2001; Yeni-Komshian et al., 2000), such as Age of Arrival or Length of Residence, as it was felt that acquisition of a specific phonetic variant was a prerequisite to controlled variability.

Another aim of the study was to identify factors contributing to variability in non-prevocalic r/ realisations. Sociolinguistic studies traditionally differentiate two main types of conditioning factors: internal and external ones. External constraints encompass an extremely wide range of factors typically exploited by the early school of variationist sociolinguistic research (Labov, 1972; Trudgill & Trudgill, 1974) as well as the more recent studies which emerged from that early approach (Eberhardt & Downs, 2015; Eckert, 2012), such as e.g. age, gender, class, which are social in nature, as opposed to internal constraints, i.e. aspects of the language itself which contribute to variability of the linguistic forms in question (Wolfram, 1997), e.g. semantic meaning, prosody or specific phonetic context. Therefore, having examined the role of SLA factors, the study turns to investigating the role of both internal and social constraints on /r/ variability in order to gain a fuller understanding of the factors affecting Polish speakers’ of L2 English rhoticity and /r/ variant choices.

Finally, the study also aims to find evidence of any metalinguistic practices and investigate the participants’ meta-awareness of the /r/ variable, which can play an important function in the emergence and consolidation of higher-order indexical meanings (Johnstone, 2009, 2010; Johnstone et al., 2006; Johnstone & Kiesling, 2008; Silverstein, 2003). Through examining qualitative data obtained in interviews, the study also tries to identify indexical meanings linked to the variable.

It is hoped that the study will make a contribution to the understanding of the complex reasons behind the presence of a prominent, often persistent foreign accent in some migrant L2 English speakers from Poland, which may have implications not only for EFL/English pronunciation teachers, but may also shed light on issues related to integration into the host society, bias around accents, as well as the beliefs those migrants share about the members of their own community and their own L2 speech characteristics.

1.4 Overview of the Thesis

The thesis consist of a literature review section, which first discusses the phenomena of rhoticity and /r/ realisations in the context of English, Polish and Polish-accented English, while outlining internal constraints on /r/variability. The section is followed by a brief overview of key variables investigated in SLA literature, as it is believed that, particularly in the context of L2 performance, these may have a significant impact on the speakers' linguistic choices. The final section of the literature review focuses on the issue of indexicality and reviews key studies in the field in order to establish a theoretical framework for exploring indexical meanings behind the participants' linguistic choices. The chapter ends in a list of research questions emerging from the review of literature.

The literature review is followed by the Methodology Chapter, which presents and provides a justification for all the research tools employed in this study. The following chapter presents the results of both quantitative and qualitative data analysis and discusses them, outlining key findings regarding the acquisitional, social, as well as phonetic factors affecting variability in non-prevocalic /r/ realisations in Polish-accented English. The thesis ends with a short chapter providing an overview of the key findings as well as a discussion of the current study's limitations, some conclusions, and suggestions for future research. The final part of the thesis comprises appendices, which present the research tools employed in the study, the interview data collected and the statistical analysis results.

Chapter 2 Literature Review

This chapter is divided into four main sections. The first two discuss the phenomenon of rhoticity and various /r/ realisations employed in English and Polish, while focusing on internal factors governing variable rhoticity and variability in non-prevocalic /r/ realisations in L2 English of Polish migrants living in the south of England. Section 2.3 presents a brief overview of key variables commonly investigated in SLA studies, as it is felt that successful acquisition of a linguistic variant is a prerequisite for productively controlled variation and higher order indexical meaning which can be linked to /r/ variants. Finally, Section 2.4 discusses the phenomenon of indexicality and reviews a number of key studies in the area.

Each main section finishes with research questions that emerge from this specific part of the literature review; for the reader's convenience, these research questions are also presented in the form of a comprehensive list at the very end of this Literature Review chapter.

2.1 Rhoticity

Sections 2.1 and 2.2 discuss the phenomenon of rhoticity as well as various /r/ realisations employed in English and Polish, while focusing on internal factors governing variable rhoticity and variability in non-prevocalic /r/ realisations in L2 English of Polish migrants living in the south of England.

Section 2.1 introduces the concept of *rhoticity*, which is followed by a short overview of the history of rhoticity in England and a detailed discussion of English phonotactics related to /r/ distribution. In addition, the phenomena of sandhi /r/ are presented, with a focus on constraints on sandhi /r/ variability. The latter have been included in this Literature Review due to the scarcity of studies focusing specifically on internal constraints on variable rhoticity in English English. It was therefore hoped that outlining phonetic constraints on sandhi /r/ use, which is variable in some varieties of native English and relatively well-documented (Foulkes, 1997; Gick, 1999; Hannisdal, 2007, 2010), would provide a basis for investigating phonetic environments which may favour rhoticity in L2 English of Polish migrants. This is followed by a discussion of regional distribution of rhotic dialects within England, with a particular focus on the area of Berkshire, as this is where most of the participants in the current study were based. Finally, a brief discussion of rhoticity in the context of Polish and Polish-accented English is provided.

Section 2.2 discusses rhotics and provides an overview of a range of /r/ realisations employed in British English, American English, Polish and Polish-accented English.

2.1.1 Definition of Rhoticity

The phonological pattern which this research focuses on is rhoticity. It is defined by Heselwood et al. (2010) as “an English dialect feature [which] refers to the continuing presence of constrictive realisations of /r/ in pre-consonantal and pre-pausal contexts in words such as ‘card’ and ‘car’” (p. 331). In other words, non-rhotic accents “lack non-prevocalic /r/” (Trudgill, 2000b, p. 9).

English accents can be classified as either “rhotic”, a label which describes most Scottish, Irish, Welsh or North American accents (except for the southern United States and eastern New England), or “non-rhotic”, e.g. Australian, New Zealand and South African varieties, as well as General British English (Hughes et al., 2012; Kreidler, 2008). Brown (1988) states that there are more native speakers of rhotic varieties of English than of non-rhotic ones. In literature, non-rhotic varieties are also referred to as “r-less”, as opposed to “r-ful”, i.e. rhotic ones (J.C. Wells, 1982). In the latter, the sound /r/ occurs pre-consonantly and pre-pausally, as well as pre-vocalically, which is consistent with spelling.

However, there are also varieties of English which do not conform to this binary distinction into rhotic and non-rhotic; for example, Trudgill (2000a) points out that there are areas in East Yorkshire where postvocalic /r/ is retained in some phonological contexts. Similarly, in Jamaican English speakers articulate postvocalic /r/ in the word-final position, e.g. [fa:r], but not in the pre-consonantal position, e.g. [fa:m] (J.C. Wells, 1982). Another pattern that facilitates the retention of rhoticity within otherwise non-rhotic accents is linked to the occurrence of mid central vowels [ə] and [ɜ:] (J.C. Wells, 1982); for example, some speakers of American English articulate postvocalic /r/ in NURSE and lettER words, but not in other phonological contexts (J.C. Wells, 1982). Such intermediate varieties are labelled by (J.C. Wells, 1982) as “semi-rhotic”.

2.1.2 A Brief History of Non-Rhoticity

The split of English into rhotic and non-rhotic varieties is, according to Ladefoged and Maddieson (1996), a consequence of the position rhotics take in the syllable and their tendency to interact with neighbouring vowels. Brown (1988) and Trudgill (2000a) state that at some point, all varieties of English were rhotic, which became encoded in the spelling system. However, due to the historical processes of sound change, many parts of England lost

post-vocalic /r/ in the Early Modern English period (Ryfa, 2012). Trudgill (2000a) hypothesises that the change started in the south-east of England and subsequently spread to other parts of the country. This process of shifting from rhoticity to non-rhoticity is referred to in literature as /r/-dropping (J.C. Wells, 1982), /r/-loss (Trudgill, 2000a), derhoticisation (Stuart-Smith, 2007), /r/-vocalisation or /r/-deletion (Gick, 1999).

In Old English and Middle English, /r/ was most likely realised as an alveolar trill or a tap; however, those realisations were later replaced first with fricated, and then with non-fricated approximant realisations, ultimately, by the 18th century, leading to the loss of post-vocalic /r/ in the pre-consonantal and pre-pausal position, the remnant of which was the schwa [ə] attached to a preceding vowel, forming a long vowel or a diphthong (Cruttenden, 2014). Since this “etymological /r/” has been preserved in the spelling, for many speakers of non-rhotic varieties, an alternation in pronunciation has been created, where constrictive /r/ is articulated pre-vocalically, but not in other contexts (Foulkes, 1997).

/r/ dropping also resulted in mergers of lexical sets START/PALM, NORTH/THOUGHT and lettER/commA (J.C. Wells, 1982). This process did not take place in Scottish, Irish and North American varieties, some of which still retain the contrast between the respective pairs of sounds (Lindsey, 2013; J.C. Wells, 1982). J.C. Wells (1982) provides an extensive, detailed discussion of historical phonological developments leading to the loss of non-prevocalic /r/ in the majority of English accents and resulting in differences in vowel inventories between different varieties (pp. 212 - 231).

2.1.3 Rhoticity and Phonotactics

J.C. Wells (1982) calls rhoticity “by far the most important case of a difference in phonotactic distribution” (p. 76). While rhotic and non-rhotic varieties of English share the same contexts for prevocalic and intervocalic /r/, they differ in terms of constraints on non-prevocalic /r/, i.e. one in the postvocalic, word-final or pre-consonantal position. These phonological contexts for /r/ in English will be discussed in the following sections.

2.1.3.1 Pre-vocalic /r/

In syllable onsets, /r/ occurs in the following contexts:

- in the syllable-initial position, before any vowel, e.g.: “red”, “round”, “wrist”;
- as the second element of syllable-initial, two-consonant clusters, e.g.: “pray”, “drain”, “graze”, “shrill”;

- as the third element of syllable-initial, three-consonant clusters, e.g.: “spray”, “street”, “scream”.

In accordance with the scale of sonority, /r/ always occurs in the position adjacent to the vowel (Wiese, 2011), i.e. between obstruents and vowel sounds. In the initial position, it will be voiced and frictionless (Hughes et al., 2012). In two-consonant clusters it can be preceded by both voiceless and voiced stops, but only voiceless fricatives occur syllable-initially before /r/, and these do not include /s/, which never precedes /r/ (Kreidler, 2008). In this position, /r/ will be fully devoiced and fricated after voiceless accented plosives /p/, /t/, /k/ (e.g. “price”, “tree”, “crow”) (Hughes et al., 2012), voiced and fricated after /d/ (e.g. “dry”) (Cruttenden, 2014; Hughes et al., 2012), and “somewhat devoiced” following voiceless fricatives or unaccented voiceless plosives (e.g. “fry”, “shrink”, “apron”, “mattress”) (Cruttenden, 2014). In three-consonant clusters, the initial segment is always /s/ and the second consonant is a voiceless plosive, i.e. /p/, /t/ or /k/ (Kreidler, 2008). According to (Cruttenden, 2014), /r/ is, again, “somewhat devoiced” in this position (e.g. “street”, “screen”).

2.1.3.2 Post-vocalic /r/

Postvocalic /r/ in syllable codas is normally only articulated in rhotic varieties of English. It occurs in the following contexts:

- in the syllable-final position, e.g.: “bar”, “four”, “there”;
- as the first element of syllable-final, two-, three-, or four-consonant consonant clusters, e.g.: “warp”, “word”, “march”, “work”, “berg”, “wharf”, “birth”, “force”, “marsh”, “arm”, “barn”, “girl”, “first”, “corpse”, “quartz”, “world”, “firsts”.

In addition, as Cruttenden (2014) observes, pre-consonantal /r/ may occasionally be pronounced even by non-rhotic speakers as a result of elision, for example, in the word “carol” [kaɪl].

In syllable codas, rhotics come immediately after the vowel and before obstruents. If two liquids (/r/ and /l/) or a rhotic and a nasal (for example, /r/ and /m/) occur syllable-finally, the rhotic again comes first (e.g. “twirl”, “farm”) (Kreidler, 2008). The exact number of specific contexts for the postvocalic /r/ depends on the vowel inventory of the variety in question; e.g. although in his description of American (Kreidler, 2008) mentions nine “/r/ vowels”,

including two different vowels for “war” and “door”, he also acknowledges the fact that a growing number of American English speakers are losing this distinction.

Phonetically, the sequence VOWEL + r can be realised in different ways, ranging from a sequence of a vowel plus /r/, for example, /ɑ:r/, with r-colouring occurring only in the final part of the vowel, to an /r/-coloured vowel, with a /r/-colouring occurring throughout the whole duration of the vowel, as often is the case for [ɚ] and [ɜ:] in many varieties of American (Delattre & Freeman, 1968; Kreidler, 2008; J.C. Wells, 1982) and Canadian English (Kreidler, 2008). Moreover, the type of the consonantal /r/ employed varies depending on the speaker, variety, or even style (see section 2.2). However, it should be pointed out that regardless of its actual phonetic realisation, the V+r sequence is phonologically interpreted as V+C. For example, the sequence of /ə/ and /r/ in word-final unstressed syllables can be realised either as a non-syllabic sequence of /ə/ and /r/, or as a syllabic consonant (Collins & Mees, 2013), i.e. acting as syllable nuclei and represented as [ər] or /r/. In either case, it is phonologically interpreted as /ə/ plus /r/ (Kreidler, 2008).

2.1.4 /r/ Sandhi: Linking and Intrusive /r/

The phenomena of linking and intrusive /r/ are related, as they are only distinct orthographically and etymologically (Trudgill, 2000a; J.C. Wells, 1982); as such, they are often discussed under an umbrella term, i.e. “liaison” (Cruttenden, 2014), “linking /r/” (Cruttenden, 2014; Lindsey, 2013), “/r/ sandhi” (Foulkes, 1997) or “/r/ insertion” (J.C. Wells, 1982). To avoid potential confusion, this thesis uses the term “linking /r/” to refer to the etymological /r/, the term “intrusive /r/” is employed to refer to the unwritten /r/, while the term “/r/ sandhi” is used to encompass both phenomena.

In many non-rhotic accents, postvocalic /r/ can be articulated word-finally after the non-high vowels NEAR, SQUARE, PURE, NORTH, NURSE, START or lettER (Cruttenden, 2014), if it is immediately followed by a vowel sound, and if both words occur in the same prosodic unit (“here at last”, “far away”). This phenomenon is known as linking /r/.

Interestingly, this phenomenon does not occur in all non-rhotic accents; while there is evidence for the use of linking /r/ in England, the New York City area and Australia (Lindsey, 2013), it is absent in the accents of the American south and South African English (Kreidler, 2008; Lindsey, 2013), where speakers do not produce a consonantal /r/ either in “the car” or in “the car is”, but where a centring offglide (Kreidler, 2008) or a glottal stop (J.C. Wells, 1982) may be employed, respectively.

While linking /r/ is essentially a manifestation of the etymological /r/ preserved in the spelling (Foulkes, 1997), intrusive /r/ is un-etymological and, therefore, unwritten. According to J.C. Wells (1982), intrusive /r/ is the result of “the natural tendency to give identical treatment to words with identical endings” (p. 223). Even though citations forms of words belonging to START/PALM, FORCE/THOUGHT and lettER/commA lexical sets have shared the same vowel respectively since they merged in the 18th century (Lindsey, 2013; J.C. Wells, 1982), words containing <r> have actually had two forms: a prevocalic and a non-prevocalic one. For instance, “store” is pronounced /stɔːr/ in the former context, and /stɔː/ in the latter. In effect, the non-prevocalic form of “store” /stɔː/ rhymes with e.g. “law” /lɔː/; this, according to J.C. Wells (1982), has led to the alignment of former members of the THOUGHT set with the prevocalic forms of members of the FORCE set before vowels, resulting in regularizing of the language (Trudgill, 2000a), i.e. the phenomenon of intrusive /r/, e.g. *law and order* /lɔːr ən ɔːdə/. Therefore, /r/ sandhi is a process which occurs only in non-rhotic varieties, since rhotic accents have never lost non-prevocalic /r/, which was the initial trigger for both linking and intrusive /r/.

2.1.4.1 Social and Stylistical Variation in /r/ Sandhi

Even in the accents that do make use of /r/ sandhi, both linking/r/ and intrusive /r/ are optional; their use may depend on contextual style and speech rate (J.C. Wells, 1982). While Brown (1988) states that linking /r/ is “a feature of fluent, colloquial style, and is not so common in careful declarative style” (p. 145), according to (Cruttenden, 2014), it is relatively frequent in all styles of speech. On the other hand, intrusive /r/ is most frequent in fixed phrases and common collocations, such as “Pizza Express” or “law and order” (Lindsey, 2013). When speakers do not employ /r/ sandhi, the boundary between the final vowel of the first word and the initial vowel of the second word can also be marked with a glottal stop (Cruttenden, 2014; Lindsey, 2013; J.C. Wells, 1982), which may occur in slow, deliberate speech or when the speaker is pronouncing words and phrases which they are less familiar with (Lindsey, 2013).

Another factor that may play a role in the variable use of /r/ sandhi is social in nature; namely, the strong negative attitudes evoked by intrusive /r/. Since linking /r/ reflects the spelling, it is not stigmatised by people with strong prescriptive attitudes to language use (Brown, 1988; J.C. Wells, 1982). On the other hand, intrusive /r/, which does not enjoy the benefits of being “legitimised” by literacy, is commonly labelled as “incorrect” or “slovenly”, particularly, according to both Cruttenden (2014) and J.C. Wells (1982), word-internally, as

in “drawing” /drɔːrɪŋ/, “gnawing” /nɔːrɪŋ/ or “withdrawal” /wɪðdrɔːrəl/. However, despite the claims that word-internal intrusive /r/ is the most stigmatised and, as such, relatively rare, Hannisdal’s (2007) study on change in RP, which examined speech recordings of British television newsreaders, reveals that this type of sandhi /r/ occurred in about 33% of the tokens.

Since the ability to suppress the stigmatised intrusive /r/ while simultaneously retaining the socially acceptable linking /r/ requires an extensive working knowledge of spelling, according to J.C. Wells (1982), many speakers have adopted the strategy of suppressing all forms of /r/ sandhi. Nevertheless, despite the “negative press” that intrusive /r/ has been receiving as a slovenly recent development in the English language, on his online blog, Lindsey (2013) provides a substantial body of evidence in the form of audio clips from old films to prove that the phenomenon can be documented at least as far as early 20th century, while probably dating back to the 18th century, i.e. the period when /r/ dropping and the resulting vowel mergers took place. Moreover, there is evidence that the phenomenon of intrusive /r/ is not always perceived as stigmatised. A study by Foulkes (1997) yields evidence for stylistical shifts in the speech of middle-class speakers from Newcastle, but not in the expected direction where more attention to speech predicts the use of forms regarded as more “correct” (Labov, 1972). Surprisingly, the middle-class participants from Newcastle produced more instances of intrusive /r/ when reading out items from a word list than during their conversations with another participant, which Foulkes (1997) interprets as indicative of prestige associated with intrusive /r/ by those speakers, who according to him, regard the phenomenon as “advantageous”.

On the other hand, the aforementioned studies by Hannisdal (2007, 2010), which investigated a number of phonetic/phonological variables in modern RP based on the analysis of speech samples of British TV presenters, identified significant inter-speaker variation, with some speakers avoiding it completely, and others using it frequently; nonetheless, no evidence of statistically significant social, i.e. gender or class stratification (as operationalised by the prestige of the TV channel) in the use of linking or intrusive /r/ was found. The fact that the results from Hannisdal’s studies (2007, 2010) differ from those of Foulkes (1997) indicates that the indexical meaning of the variable is different depending on the variety and the speech community.

2.1.4.2 Linguistic Variability Constraints in /r/ Sandhi

In terms of phonetic contexts which facilitate /r/ sandhi, older sources seem to present somewhat contradictory views. Cruttenden (2014) states that both linking and intrusive /r/ are the most likely to occur after /ə/, for example, “vanilla essence” /vənɪlər 'esəns/, while the latter is not likely to be employed following /ɑ:/ or /ɔ:/, which he attributes mainly to the fact that words ending in either of the former two vowels are less common in the English language than words with a final /ə/, which, as he speculates, makes the speakers more aware of the “correct” pronunciation, i.e. one without the intrusive /r/. However, Brown (1988) believes that intrusive /r/ occurs the most frequently following /ɔ:/, which he links to the existence of a large number of homophone pairs consisting of common lexical items distinguished only by the potential final /r/, such as /lɔ:/ (“law” or “lore”). Such differences between the different sources might perhaps stem from the fact that their authors made general claims about language use based on their own intuitions rather than empirical research.

However, more recent empirical studies shed more light on issue, explaining that although the phonetic context for intrusive/r/ is potentially the same as for the linking /r/, it is due to the extremely low number of words with word-final /r/-liaison vowels, which are at the same time mostly foreign in origin, that the number of actual contexts is reduced to /ə/, with the largest number of lexical items available, followed by /ɔ:/, followed by /ɑ:/ and, finally, /ɪə/ (Hannisdal, 2007).

In fact, Hannisdal (2007, 2010) identifies a number of linguistic constraints regarding the use of /r/ sandhi, which are linked to lexical factors, stress and phonetic context.

2.1.4.2.1 *Factors Affecting the Use of Linking /r/*

Most important factors affecting the use of linking /r/ as identified by Hannisdal (2010) could be summarised as follows:

Lexical:

- Linking /r/ almost invariably occurs in common, fixed expressions, e.g. “year-old”, “four o’clock”, “far away”, “share index”, “Far East”, “Winter Olympics”.
- It is most frequent between short, usually grammatical lexical items, e.g. “there are”, “here is”, “where a”, “or a”, “your own”.

- It is especially frequent before and after prepositions, e.g. “for a”, “before a”, “over a”, “after it”, “here on”, “more of”, “fear of”, “number of”.
- It is less common between longer lexical words, e.g. “consumer attitude”, “senior administration”, “former economic”, “tighter immigration”.
- It is /r/ is typically dropped before proper names, e.g. “Mister Annan”, “Doctor Austen”, “Sir Alex”.

Stress-related:

- It is significantly less likely to occur immediately before a stressed vowel, e.g. “for hours”, “were injured”, “your e-mail”.

Phonetic:

- It is avoided in the vicinity of another /r/, both before and after an /r/, e.g. “career of”, “interior of”, “lecturer is” (after); “were arrested”, “regular Iraqis”, “border area”, “Blair arrived”, “major air attack” (before).

This final constraint corresponds with previous research (Brown, 1988; Foulkes, 1997), which states that sandhi /r/ is less common if there is another /r/ “nearby”.

While investigating the use of linking /r/ in the speech of Polish migrants is beyond the remit of this study, phonetic constraints on its use in RP, or, using Cruttenden’s (2014) term, General British (see section 2.2.3.1.1), may allow to draw some comparisons between the variability in the native use of linking /r/ and the variable rhoticity in L2 English of Polish migrants in the UK.

2.1.4.2.2 Factors Affecting the Use of Intrusive /r/

In terms of intrusive /r/, Hannisdal (2010) identified the following predictors:

Lexical:

- It is more frequent following monosyllabic grammatical words, e.g. “Russia is”, “dilemma of”, “China and”.
- It is less frequent following longer lexical words, e.g. “media alliance”, “California investigate”, “Al Qaeda operative”.
- It is largely absent immediately before names, e.g. “Katya Adler”, “Patricia Amos”, “Muqtada Al-Sadr”, “Jemaah Islamiah”, “saw Anthony”, but it is not

affected by the same restriction following proper names, e.g. “Nelson Mandela /r/ is 85 today”; “Martina Navratilova /r/ has turned back the years”.

Stress-related:

- It is mostly avoided in contexts where it is followed by a stressed vowel, e.g. “Asia analyst”, “Malaga airport”, “Al Qaeda allies”.

Phonetic:

- It correlates with the use of linking /r/: most speakers who employed linking /r/ more frequently also displayed higher rates of intrusive /r/ use.
- It is affected by the quality of the preceding vowel: in Hannisdal (2007), intrusive /r/ was significantly more frequent after /ɔ:/ and /ɑ:/ than /ə/, which contrasts with Cruttenden (2014).
- It is avoided in the vicinity of another /r/, but not to the same extent as the linking /r/.
- It is avoided where the two /r/s are separated only by an unstressed weak vowel, e.g. “camera is”, “Basra in”, “drama around”.
- It may be articulated following a long, stressed vowel between the two /r/-sounds and when there are two syllables between the /r/s, e.g. “Korea /r/ and”, “area /r/ of”, “straw /r/ is”, “draw /r/ a”.

2.1.5 Rhoticity in England

As mentioned before, up unto the Early Modern English Period, English accents were rhotic (Trudgill, 2000a). It was not until the 18th century that non-pre-vocalic /r/ began to disappear from the standard variety of English (Ryfa, 2012). The innovation began to spread from the south-east of the country into other regions and the spread still continues today (Trudgill, 2000a), affecting other regions of the UK, e.g. Scotland (Lennon et al., 2015; Stuart-Smith, 2007).

In his classification of Traditional Dialects, which he defines as those used mainly in the “more remote and peripheral rural areas of the country” (p. 5), Trudgill (2000a) uses the presence or absence of non-pre-vocalic/r/ as key feature in distinguishing between Western and Eastern dialects within the Southern area of England. However, he also points out that every year the traditionally rhotic areas are shrinking, with only two major regions in

England where rhotic accents are still surviving (Trudgill, 2000a). Trudgill (2000a) identifies these areas as parts of Lancashire, such as Blackburn and Burnley, as well as the southwest of the country, including Cornwall, Dorset, Devon, Gloucester, Hereford Somerset and Wiltshire.

According to Trudgill (2000a), the process of derhoticisation has accelerated due to the impact of the British media, which have largely adopted the non-rhotic GB accent, and the resulting low status attached to rhotic English varieties spoken in England. This low status remains in stark contrast with the sociolinguistic status of rhoticity in the USA, where it is the non-rhotic varieties that indicate low prestige (Eberhardt & Downs, 2015; Labov, 1972; Trudgill, 2000a). In England, rhotic, often retroflex pronunciations of words such as fertilizer are sometimes used to stereotype “ruralness” or even “mock country people for being unsophisticated peasants” (Trudgill, 2000a, p. 27).

2.1.5.1 Rhoticity in Berkshire and Reading

Since most of the participants in the current study were based in Reading, with only a small minority living in London, this section is going to focus specifically on the Reading area, while also explaining its connections, including linguistic ones, to London.

Reading is the county town of Berkshire with a population of 155,698 (*2011 Census*, 2011). It is located about 40 miles west of London in the M4 corridor at a junction of railways running south from the Midlands and west from London (Britannica). Reading has a stable local population, but its convenient location as well as the university have attracted numerous international businesses and, consequently, a significant numbers of migrants (Williams & Kerswill, 1999), both internal (domestic) and international, with a considerable proportion of the latter being international students. Such conditions result in languages and dialects coming into contact, which in turn triggers language change (Holmes & Wilson, 2017). Indeed, there is evidence (Trudgill, 2000a; Williams & Kerswill, 1999) that a significant change regarding rhoticity is currently taking place.

In Trudgill's (2000a) classification of Traditional Dialects the variety used in Berkshire was grouped together with areas such as northeastern Hampshire, Sussex, Surrey and Kent as comprising the Southeast Dialect area, which was a part of the Western Dialects subgroup of the larger unit called simply the Southern Dialects. Like other accents in the Western Dialects subgroup, the traditional Berkshire accent is rhotic. Indeed, a study by Williams and Kerswill (1999) researching dialect change in the town of Reading revealed that, for working class inhabitants of Reading above the age of 50, rhotic pronunciation was "the norm" in words belonging to the START, NORTH/FORCE and lettER lexical sets (J.C. Wells, 1982), with the latter being realised as an /r/-coloured schwa [ə̞]. In addition, for words belonging to the NURSE set, the rhotic pronunciation seemed to be the norm not only among older working-class speakers, but, according to Williams and Kerswill (1999), was also likely to be present, albeit sporadically, in the speech of other age groups. The study also found ample evidence of both linking and intrusive /r/, as well as some instances of the so-called labiodental /r/ (Williams & Kerswill, 1999) (see section 2.2.3.2.5).

Despite the evidence for variability in rhoticity provided by Williams and Kerswill (1999), the fact that /r/-ful realisations were more prevalent among older speakers might suggest that a linguistic change is taking place. This is confirmed by Trudgill (2000a), who states that, alongside Oxfordshire and Hampshire, Berkshire is "in the front line" of the shift towards non-rhoticity (p. 52). Indeed, Trudgill's (2000a) map of Modern Non-Standard Dialects places a large part of Berkshire on the non-rhotic side of the linguistic boundary (see Figure 1), while (Ryfa, 2012) includes Reading and a significant part of Berkshire in the non-rhotic Home Counties Modern Dialect Area, alongside, among others, Greater London.

Figure 1

A Map of Modern Non-Standard Dialects Showing Rhotic Areas



Note. The location of Reading has been indicated with a red circle (Trudgill, 2000a).

Apart from the already mentioned influence of media and the low prestige that rhotic domestic accents have in England, other factors which may be facilitating the process of non-prevocalic /r/ loss in Reading could be related to migration and the town's proximity to London, with the latter being linked to the spread of other linguistic innovations, such as t-glottaling and th-fronting, into the speech of young people in Reading (Williams & Kerswill, 1999). Considering the fact that both Williams and Kerswill (1999) and Trudgill (2000a) results are two decades old, one could expect that the Reading accent is now even more firmly established on the non-rhotic side of Trudgill's (2000a) dialect map. Indeed, in today's Reading, rhoticity is not typically heard in either working class or higher class neighbourhoods; therefore, it seems that the local accents have moved even closer towards the speech of London, which most likely was the cradle of /r/-dropping (Trudgill, 2000a), and where the varieties used at all social levels have been non-rhotic for centuries, from Cockney

and RP (Trudgill, 2000a) to General British (Cruttenden, 2014) and Multicultural London English (Kerswill, 2014) today.

2.1.6 Rhoticity in Polish and Polish-accented English

Polish is a West Slavic language spoken mainly by the majority of the population in Poland as well as Polish citizens living abroad; according to the 2011 Census, the high number of Polish speakers made Polish England's second language (*2011 Census*, 2011). Polish is "rhotic" in the sense that constrictive /r/ realisations are produced regardless of the phonological context (Szpyra-Kozłowska, 2018); whenever <r> occurs in the spelling, it is articulated in speech. Therefore, as in the case of rhotic accents of English, the phenomenon of linking /r/ does not apply to the language. In addition, since Polish, unlike English or French, does not display the tendency to avoid glottalisation in the context of phrase-medial word initial vowels in favour of linking processes (Schwartz, 2017), to the native speakers of Polish, intrusive /r/ is a foreign concept.

To the best of the researcher's knowledge, no literature on the topic of variable rhoticity in the English of Polish migrants in the UK has been published to date apart from a conference abstract by Waniek-Klimczak and Matysiak (2016), and there have been very few published studies on rhoticity in Polish-accented English in general, apart from a single paper by Szpyra-Kozłowska (2018) and a few abstracts of relatively recent conference presentations often reporting on ongoing projects (Waniek-Klimczak & Zając, 2017; Zając, 2016) and, as such, lacking detailed results.

The study by Waniek-Klimczak and Matysiak (2016) investigated the use of post-vocalic /r/ in two groups of Polish migrants in the UK with various proficiency levels upon arrival labelled as "experts" and "learners". Waniek-Klimczak and Matysiak (2016) found evidence for variable rhoticity, with higher variability rates in the lower proficiency group. However, the proportion of non-rhotic realisations increased in the learners with longer length of residence and higher proficiency level in English upon arrival.

Szpyra-Kozłowska (2018) investigated rhoticity in L2 English of Polish secondary school students in the south-east of Poland. She elicited English speech samples using several diagnostic sentences containing /r/ in different phonetic contexts from 25 students aged 15 to 16. The results show evidence of variable rhoticity, with "some speakers" consistently producing rhotic or non-rhotic forms respectively, and others displaying varying degrees of variability. Interestingly, the author reports that "non-rhotic" participants seemed to be less

variable in their productions than the “rhotic” ones; however, it is not fully clear what criteria were employed to classify a token as rhotic or non-rhotic, especially that the study did not involve any acoustic analysis. Since all the participants were reported to have the same level of proficiency in English (“pre-intermediate”), unlike in Waniek-Klimczak & Matysiak (2016), the study did not explore the link between the proportion of non-rhotic realisations and L2 proficiency levels, which will be investigated in this study.

2.1.6.1 Constraints on Rhoticity in L2 English of Polish Speakers

In terms of phonetic environments conducive to non-rhoticity, the “rhotic” participants “occasionally” produced non-rhotic forms when /r/ occurred word-finally, e.g. in the word “our” (it is not known whether the form produced was strong or weak), and words such as “over”, “rubber”, “September” (Szpyra-Kozłowska, 2018), i.e. lexical items belonging to the *letTER* lexical set (J.C. Wells, 1982). Another context which seemed to favour non-rhotic variants, albeit reportedly “very rarely”, involved the occurrence of postvocalic /r/ before consonants, e.g. “morning”, “birthday”, “darling” (Szpyra-Kozłowska, 2018). While it is interesting to see evidence of internal constraints on rhoticity in L2 English Polish speakers, it is not clear whether the author made use of statistical measures and hence, it is not known whether the two phonetic environments discussed above were indeed statistically significant and thus generalisable to a wider population. In addition, another reason for a cautious approach to the generalisability of Szpyra-Kozłowska’s results to other Polish speakers of L2 English is that all the participants in the study had a similar level of proficiency in English, attended the same class and were taught by the same teacher. For the above-mentioned reasons, it seems that the findings of Szpyra-Kozłowska (2018) might be best regarded as tentative.

Nevertheless, the study’s main contribution seems to be establishing the existence of the high degree of variability in rhoticity characterising the speech of Polish speakers of English despite the fact that GB still seems to be the dominant model accent used by English teachers in Poland (Szpyra-Kozłowska, 2018; Waniek-Klimczak & Matysiak, 2016). Szpyra-Kozłowska’s (2018) evidence for variable rhoticity corresponds both with Waniek-Klimczak and Matysiak (2016) as well as the current study’s author’s previous experience both as an English pronunciation tutor in a teacher training college in Poland, and as a member of the Polish migrant community in the south of England.

It is extremely difficult, if not impossible, to identify a factor which would on its own account for variability in rhoticity in L2 speech of non-native speakers of English. Factors mentioned in literature include the influence of American English (Brown, 1988; Szpyra-Kozłowska, 2018) and the potential appeal of a rhotic model as “the easier option” for international learners (Jenkins, 2000), including Poles (Spiewak & Golebiowska, 2001); the impact of spelling, which foreign learners of English are reported to be particularly susceptible to (Brown, 1988), and which often leads to “spelling-induced” (mis)pronunciations (Szpyra, 2014); as well as possible effects of language transfer from the learners’ “rhotic” L1 (Szpyra-Kozłowska, 2018). An interesting explanation, based on the phonological structure of Polish lexical morphemes, is offered by (Szpyra-Kozłowska, 2018): since in Polish stems of masculine nouns almost invariably end in a consonant, non-rhotic realisations of lexical items containing word-final postvocalic /r/ may seem “morphologically incomplete“ to Polish speakers of English, who might feel the need to “improve” the phonological structure of English words by adding a consonant, i.e. producing a constrictive realisation of the word-final /r/.

In addition to the factors discussed above, speakers of L2 English also affected by a whole range of SLA-related (Zuengler, 1988), as well as social factors, even if they reside in their home countries, as evidenced by Rindal’s study (2010) on the accents of Norwegian adolescents learning English, or as tentatively suggested by Waniek-Klimczak and Matysiak (2016). Both acquisitional as well as social factors are addressed at more depth in sections 2.3 and 2.4.

It perhaps worth pointing out that all of the sources on Polish-accented English discussed above were published when this research project was already ongoing, which is why this study was meant as largely explorative, due to the fact that no literature on the subject existed when the research questions were formed. Nevertheless, the results presented in the abovementioned abstracts and Szpyra-Kozłowska (2018) article seem to confirm the researcher’s intuitions while offering opportunities for comparison. By focusing on migrants rather than secondary school learners or university students in Poland, the current study contributes to the body of knowledge regarding rhoticity in Polish-accented English which seems to be coming into existence. While EFL classrooms are undeniably important learning spaces, the context can be regarded as artificial; unlike EFL learners, members of the Polish diaspora in England operate in an authentic English-speaking environment, which means that their choices of linguistic variables can have meaningful social consequences. It is hoped that

this study will provide further understanding of the various constraints on Polish migrants' rhoticity, their choice of non-prevocalic /r/ variants, as well as the indexical meanings linked to the variable.

2.1.7 Summary and Related Research Questions

Having a shared L1 background, all the participants are expected to be influenced by the rhotic pattern of /r/ distribution in Polish. However, since all the participants in this study live and work in Reading or London, at least as far as any generalisations are possible, it could be assumed that, through their use of British media as well as through their social networks, they have been, albeit in varying degrees, mainly exposed to non-rhotic accents (Williams & Kerswill, 1999). This means that Polish migrants living in the south of England might be experiencing a wide range of factors working in two opposite directions: rhoticity vs. non-rhoticity, with the former resulting from linguistic transfer from their L1 as well as exposure to rhotic native dialects of English. This leads to the main research question:

Is the L2 English of Polish migrants consistently rhotic, non-rhotic, or variably rhotic?

As mentioned before, to the best of the researcher's knowledge, very few publications on the topic of rhoticity in Polish-accented English currently exist. However, considering results of Szpyra-Kozłowska (2018); Waniek-Klimczak and Matysiak (2016), it is predicted that the participants' L2 English will be variably rhotic. It is also expected that, to some extent, whether a rhotic or non-rhotic form is used may also depend, like in the case of variably rhotic accents or /r/ sandhi, on the phonetic context; for example, on the presence of another consonant in the syllable coda, vicinity of another /r/ (Hannisdal, 2007) or the type of preceding vowel (J.C. Wells, 1982). Hence another question emerges:

What are the internal constraints on variability in the use of rhotic and non-rhotic variants?

While investigating linking /r/ is beyond the remit of the study due to its already broad scope, according to Hannisdal (2007), intrusive /r/ is a much more rare phenomenon. As Brown (1988) points out, since non-native users of English are more likely to be affected by the spelling of English than native users, many non-native speakers of English may avoid introducing an /r/ where there is none in spelling, which should result in very low usage rates. On the other hand, Polish migrants may not necessarily share the negative attitude towards

intrusive /r/, but instead perceive it as a “normal”, or even prestigious feature of native speech (Foulkes, 1997), perhaps even indexical of “native-likeness” or high fluency in English. Indeed, this kind of “indexical reversal” or “stylistic reinterpretation” has been reported by a number of sociolinguistic studies (Kerswill, 1994; Labov, 2001; Sharma, 2021). Therefore, it is predicted that participants with more exposure to English and/or higher proficiency in the language may use intrusive /r/ in their speech. Therefore, the following further research questions arise:

Do Polish migrants use intrusive /r/?

What are the internal constraints on variability in the use of intrusive /r/?

2.2 Rhotics

Having introduced and discussed the concept of *rhoticity* in the context of English, Polish, and Polish-accented English, the thesis now turns to rhotics as a class, providing articulatory and acoustic descriptions of the various rhotic sounds and then discussing different types of /r/ realisations employed in British English, American English, Polish and Polish-accented English.

2.2.1 Rhotics – Definition and Class Membership

The term “rhotic” is, in John Wells’ own words, his “personal contribution to the English language” (Wells, 2014, p. 78). The word is derived from the name of the seventeenth letter of the Greek alphabet (Ρ/ρ): “rho”. Initially the term was used as an adjective to describe varieties of English based on the presence or absence of postvocalic /r/ (see section 2.1), but sociolinguists and phoneticians soon started using it as a noun referring to a whole class of sounds (Wells, 2014) also, less formally, known as “r-sounds” (Ladefoged & Maddieson, 1996).

The class comprises sounds produced with a whole range of manners of articulation, such as trills, taps, flaps, lateral flaps (Wiese, 2011), fricatives, approximants, as well as /r/-coloured vowels and sounds sharing the features of more than one of these categories (Ladefoged & Maddieson, 1996). Rhotics are also produced at different places of articulation: alveolar and postalveolar (coronal) as well as velar and uvular (dorsal) (Wiese, 2011). They can also be voiced or voiceless. Most languages have one /r/ phoneme, which is the case in nearly all European languages (Wiese, 2011); however, some, e.g. Catalan, may have two or even three rhotic phonemes, as evidenced in some Australian Aboriginal languages (Wiese, 2011).

Due to the heterogeneity of the category, it is difficult to provide a common denominator for all its members. Although there have been different suggestions on what the unifying property which all the members of this category share might be, according to Ladefoged and Maddieson (1996), in the case of rhotics, group membership is “largely based on the fact that these sounds tend to be written with a particular character in orthographic systems derived from the Greco – Roman tradition, namely the letter ‘r’ or its Greek counterpart ‘rho’” (p. 215).

Indeed, there has been no convincing evidence that would account for the existence of rhotics as a unified class based on their articulatory features or acoustic properties. As Wiese (2011) observes, “there is simply no articulatory feature there which is shared by all rhotics, and it is hard to see what other, possibly more general articulatory feature might do the job” (p. 10). Moreover, it seems equally difficult to convincingly explain rhotic group membership by identifying a common acoustic property. Although it has been suggested that the unifying characteristic could be a lowered third formant, this acoustic property is not shared by all rhotics sounds (Lindau, 1980). For instance, Ladefoged and Maddieson (1996) have found evidence for rhotics with high third formants, while Docherty and Foulkes (2001) observes that the sound [v] used by some speakers in England also lacks F3 lowering. This demonstrates that lower F3 value itself is not a reliable indicator of group membership for rhotics.

Lindau (1985) suggested that for rhotics, group membership could be explained through the concept of family resemblance, where each member of the category shares some property with at least one other member of that category, while no single property is shared by all the members of that category. However, this approach has been challenged by Ladefoged and Maddieson (1996), who point out that the principle of family resemblance could also be extended to sounds which are not normally regarded as belonging to the class of rhotics (e.g. bilabial trills), and as such does not convincingly account for the unity of rhotics as a group. Moreover, in some cases, the same sound can be labelled as a rhotic or not depending on the language in question. For example, voiced uvular fricatives in French are classified as rhotics, while in Classical Arabic they are not (Watson, 2002, as cited in Wiese, 2011).

Taking into consideration all the difficulties with establishing clear criteria for the existence of rhotics as a class, it may indeed seem tempting to fall back on the conventions of spelling as the only available explanation, as suggested by Ladefoged and Maddieson (1996).

However, Wiese (2011) criticises this proposal and argues that “to assume that . . . spelling has pervasive cross-linguistic influence and thereby constitutes the sole basis of the development of a class of rhotic sounds worldwide does not seem to be well founded” (p. 11). Instead, he offers an alternative proposal to move beyond the level of segmental, phonetic description and define the group based on their behaviour in terms of phonological patterning (Wiese, 2011). Wiese (2011) points out that while rhotics exhibit a high degree of phonetic variability, they are quite stable in terms of their syllabic constraints: they occupy the position immediately adjacent to the vowel in syllables regardless of their actual phonetic quality, e.g. a trill, an approximant or an r-coloured vowel. Therefore, he argues, rhotics could be defined as “a particular relative point on the sonority scale, the point between vowels and laterals” (p. 12).

Similarly, Ladefoged and Maddieson (1996) also acknowledge that what seems to bring all the distinct phones together into one class of rhotics is their “privileged” position in syllable structure. They point out that in many languages rhotics (along with lateral approximations and nasals) are allowed as the first element of consonant clusters in syllable codas, or as the second element of syllable-initial consonant clusters (Ladefoged & Maddieson, 1996). Moreover, in certain contexts, rhotics can merge with neighbouring vowel sounds or become syllabic. Wiese (2011) convincingly argues that his approach to rhotics in terms of sonority accounts for their position in the syllable, their interaction with vowels and the phenomenon of /r/-vocalisation. It also explains the issue regarding the different classification of sounds, as exemplified by the case of voiced uvular fricatives in Classical Arabic and French highlighted above: while in French the fricative in question follows the phonotactic characteristic of rhotics, occurring between obstruents and vowel sounds, in Arabic the segment has the same distribution as other fricatives, occurring even after the rhotic [r] (Wiese, 2011). Therefore, while there is no convincing phonetic evidence for the unity of rhotics as a class, it seems that Wiese’s (2011) phonology-based approach provides some evidence for approaching rhotics as a distinct group of sounds.

2.2.2 Types of Rhotics

As stated before, rhotics are an extremely heterogeneous group, displaying a whole range of places and manners of articulation. The International Phonetic Association provides the following symbols for rhotics:

referred to as “closed phases”, and openings, or “open phases”, with the first closure being somewhat longer than the others.

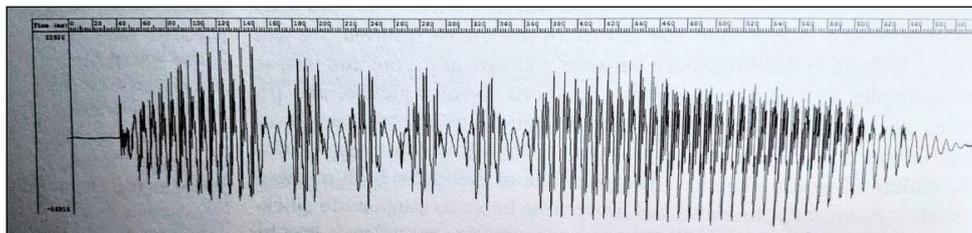
However, Ladefoged and Maddieson (1996) point out that since the articulation of trills does not involve muscular effort to control each individual vibration, but is rather the result of a very specific configuration of articulators and the air pressure applied, even very small variations in airflow or the size of the aperture may result in a whole range of “failed” realisations. Catford (2002) comments: “with too little airflow a trill may degenerate into a fricative, and with a further decrease in airflow and/or slight increase in the cross-sectional area of the articulatory channel the fricative may become an approximant” (p. 171). Therefore, trills are particularly prone to phonetic instability, which is why Ladefoged and Maddieson (1996) define trills as sounds “made with an articulatory configuration for vibration, regardless of whether vibration actually occurs” (pp. 217-218).

2.2.2.1.1 Acoustic Description of Trills

Fully articulated trills can be relatively easy to identify on a waveform image, as the closed phases are visible as very short troughs in the waveform (Ashby & Maidment, 2005).

Figure 3

A Waveform Image of a Voiced Alveolar Trill

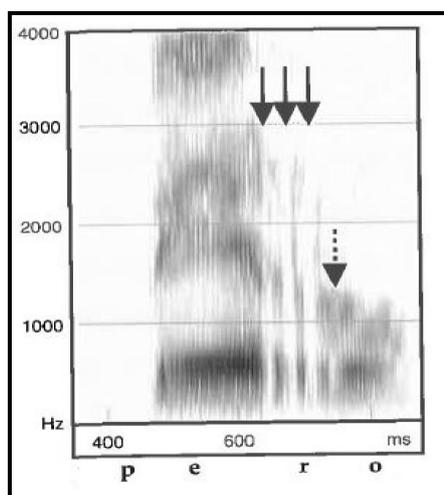


Note. Voiced alveolar trill pronounced between two vowels (Ashby & Maidment, 2005, p. 60).

Individual closed phases are visible on a spectrogram as gaps in the vertical striations representing individual pulses of the vocal folds. If there is full contact between articulators, the gaps will be relatively clear and well defined, as in the case of the first three closed phases in Figure 4, as indicated by the three solid arrows. However, if the closure is not complete, there might simply be a reduction in acoustic energy, as indicated by the dashed arrow in Figure 4.

Figure 4

A Spectrogram of the Spanish Word "Perro"



Note. The Spanish word “dog” containing a trilled [r], the three upper arrows indicate closure phases (Ladefoged, 2003).

2.2.2.2 Taps and Flaps

Taps are acoustically similar to trills in that, as Ladefoged and Maddieson (1996) note, “a trill is not unlike a series of taps” (p. 245) as they both have short closure duration. However, whereas for the production of trills articulators make contact multiple times, taps and flaps involve only a single strike of the active articulator against the passive one. Indeed, apical taps are normally articulated in 30-40ms, which makes them the fastest consonant (Lehiste, 1979, as cited in Shockey, 2008). Due to this brevity, taps are often characterised by incomplete closure (Recasens, 1991), resulting in, as in the case of trills, “degenerate” realisations (Catford, 2002), i.e. fricatives or approximants. It is also the brevity of the constriction that distinguishes alveolar trill from otherwise similar alveolar plosives (Laver, 1994; Shockey, 2008). Taps are normally voiced (Shockey, 2008), but voiceless taps do occur, e.g. Russian and Polish (Jaworski, 2010). In comparison to trills, taps are more affected by adjacent vowels, as the production of the former requires a more constrained tongue position (Dhananjaya et al., 2012).

Even though both taps and flaps occupy the same column on the IPA chart, some phoneticians (Ashby, 2013; Ladefoged & Maddieson, 1996) make a clear distinction between the two manners of articulation. While a tap is defined as a “deliberate gesture on the part of the active articulator, which moves to strike the passive articulator”, a flap is “a function of the active articulator being drawn out of its inherent alignment with a passive articulator and then being allowed to spring back to its original rest position, striking once against the

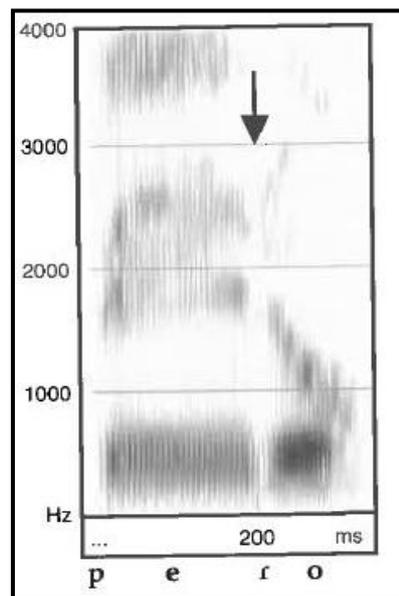
relevant passive articulator as it does so” (Ashby, 2013, p. 57). This distinction corresponds with that of Ladefoged & Maddieson (1996), who also note that while the most typical articulation of flaps involves “retracting the tongue tip behind the alveolar ridge and moving it forward so that it strikes the region in passing”, i.e. anticipatory retraction of the tongue tip during the preceding vowel, taps are usually produced “by a direct movement of the tongue tip to a contact location in the dental or alveolar region” (p. 231).

2.2.2.2.1 Acoustic Description of Taps and Flaps

According to Ladefoged (2003), spectrograms can be particularly useful in distinguishing between trills and taps and flaps, as they allow for a precise determination of the number of strikes of the active articulator against the passive one. The spectrogram below shows the Spanish word “pero” (dog), with the arrow indicating the single closed phase characteristic of taps and flaps.

Figure 5

A Spectrogram of the Spanish Word "Pero"



Note. The Spanish word “but” containing a tapped [r] (Ladefoged, 2003).

2.2.2.3 Fricatives and Approximants

The category of “r-sounds” also comprises fricatives and approximants, i.e. sounds produced with articulators in narrow approximation and wide approximation respectively (Ashby, 2013). As discussed in section 2.2.2.1, these realisations can be the result of “failed” articulation of the “canonical” variant, i.e. a trill or a tap, or they may occur in disordered

speech (Ball, 2017); in addition, they can also demonstrate allophony, i.e. occur in specific phonological contexts. For example, in most varieties of English, fricated realisations of /r/ are employed when /r/ occurs as the second element in syllable-initial consonant clusters following alveolar plosives /t/ or /d/, since in this environment, /r/ is articulated with a narrow air channel, which results in friction (Ball, 2017).

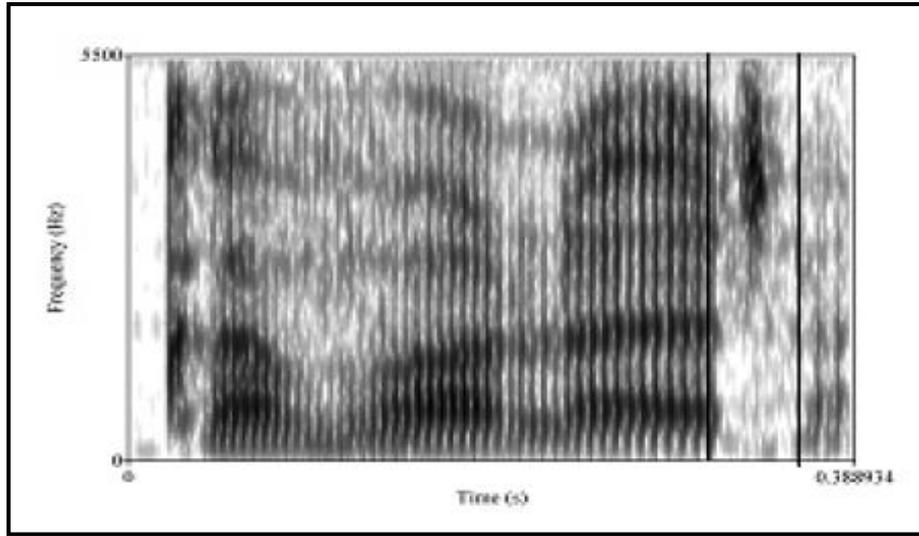
Fricative and approximant /r/s occur not only in disordered speech, due to “careless” articulation or allophonic variation, but they also function as principal members of their respective categories in numerous languages. For example, according to Ladefoged and Maddieson (1996), a uvular fricative is the most common realisation of /r/ in French, while a uvular approximant is a characteristic of Standard German.

2.2.2.3.1 *Acoustic Description of Fricatives*

Since in the production of fricatives air is forced through a narrow gap, the result is turbulence, i.e. random variations in air pressure (Ladefoged & Disner, 2012), which is perceived as friction. This noise component of fricatives can be identified in waveform images in the form of “irregular”, aperiodic soundwaves, as well as in spectrograms, as bands of noise scattered throughout the higher range of the acoustic spectrum (Ladefoged, 2003; Ladefoged & Disner, 2012), usually in the region of F3 and F4 (Jaworski, 2010). Alongside the noise component, voiced fricatives are characterised by vowel-like formants; they are also weaker compared to their voiceless counterparts, as the action of the vocal folds in vibration impacts the airstream flowing through the constriction (Ladefoged & Disner, 2012), resulting in lower amplitude. Therefore, as pointed out by (Jaworski, 2010), determining on a spectrogram whether a sound should be categorised as a voiced fricative or an approximant may not always be straightforward.

Figure 6

A Spectrogram of the Polish Word “Kawalera” (“Bachelor’s”)



Note. The word “kawalera” produced with a fricative, the /r/ segment marked by two vertical lines (Jaworski, 2010).

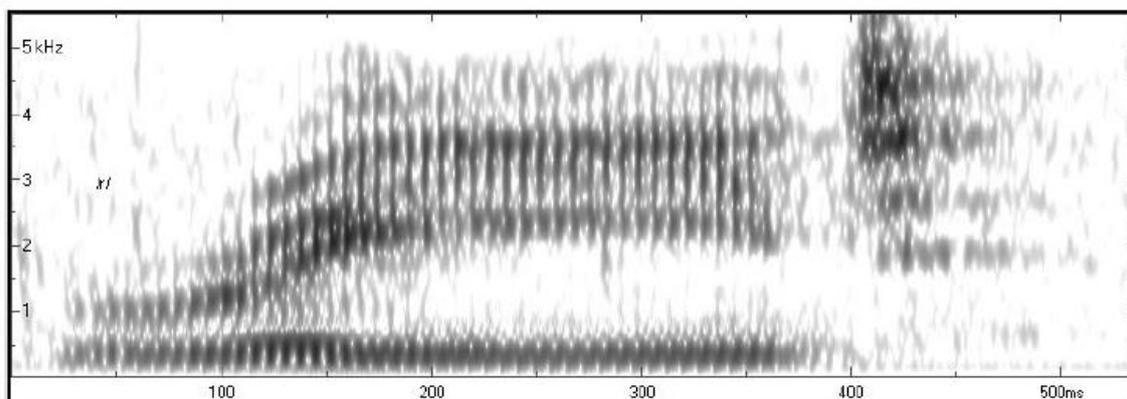
2.2.2.3.2 Acoustic Description of Approximants

The acoustic structure of rhotic approximants is similar to that of vowel sounds (Cruttenden, 2014; Foulkes & Docherty, 2000); since unfricated approximants are sonorants, they are produced with non-turbulent airflow, resulting in mostly periodic acoustic wave and, in spectrographic representation, visible bands of acoustic energy known as formants (Ladefoged & Disner, 2012).

It is commonly acknowledged in literature that a lowered third formant is an important cue for approximant realisations of /r/, distinguishing them from /l/ and /w/ (Espy-Wilson, 2004; Espy-Wilson et al., 2000; Ladefoged, 2003; Ladefoged & Disner, 2012); a low-frequency F3 closely approximating F2 is shown on the spectrogram below. Ladefoged and Disner (2012) state [ɹ] can typically be identified by F3 value below 2,000 Hz, or even below 1,500 Hz (p. 54). However, there is evidence that F3 alone may not be sufficient as the sole reliable acoustic correlate of rhoticity.

Figure 7

A Spectrogram of "Read"



Note. Spectrogram of "read" with an initial [ɹ] pronounced by a male speaker of British English (Docherty & Foulkes, 2001), formants clearly visible as bands of acoustic energy, with a low-frequency F3 closely approximating F2.

First of all, it is important to note that low F3 value does not characterise all approximant variants of /r/. According to Lindau (1985), formant values in approximant rhotics depend on the location of the constriction, which varies for different rhotics: for example, dental and uvular approximants are characterised by relatively high F3. Similarly, Docherty and Foulkes (2001) report that the labiodental variant [ʋ] employed by a growing number of speakers in England (see section 2.2.3.2.5) also lacks the F3 lowering. Thus, it could be argued that a decrease in the frequency of F3 is a correlate of the lingual approximant /r/ variants employed in British and American English.

Another potential difficulty with regarding F3 as a straightforward correlate of rhoticity in lingual approximants is that a lowered F3 can be the result of a number of different articulatory strategies. Apart from a lingual constriction in the alveolar or palatal region (Fant, 1968, as cited in Lindau, 1985) resulting from either tongue retroflexion or bunching (Foulkes & Docherty, 2000), speakers may employ lip rounding, which is common in both General British and American English and which, incidentally, also lowers other formants (Delattre & Freeman, 1968; Ladefoged & Disner, 2012; Lindau, 1985). Other articulatory configurations which result in lower F3 values are the presence of a "dip" in the tongue dorsum (Delattre & Freeman, 1968) and a constriction in the pharyngeal region (Docherty & Foulkes, 2001; Johnson, 2011; Lindau, 1978), both typical of the bunched realisations common in American English (see section 2.2.3.3). Since all of these articulatory configurations affect the frequency of F3, it seems that straightforward, unambiguous mapping of articulatory gestures onto corresponding formant values is hardly possible.

Rather than focus solely on the lowered F3 value, a number of sources (Foulkes & Docherty, 2001; Lindau, 1985; Lindsey, 2012b) focus on the proximity of F3 and F2, with the former approaching or meeting F2. According to Lindsey (2012b), the meeting point of the two formants (F2 and F3) correlates with the place of constriction in the vocal tract, with “curled” tongue shapes indicating a lower meeting-point, and the “bunched” shapes a higher one.

However, it may be argued that the role of specific acoustic cues for the production and perception of rhotics changes with the speaker’s age and exposure to various /r/ realisations. A study by Klein et al. (2012) reveals an interesting difference regarding the perception of /r/ in child speech between skilled and unskilled listeners, with both groups prioritising different acoustic cues: while the clinicians’ ratings correlated more strongly with the F2-F3 distance, the phonetically-naive listeners seemed to rely more on F3 values. The authors speculate that this difference could be explained by the fact that some children may not be able to lower F3 to the level characteristic of adult /r/ realisations, which is why they rely on the F2-F3 distance to mark rhoticity. Consequently, professionals with significant exposure to child speech learn to increase the weight of F2-F3 distance, while the perception of untrained listeners remains focused on the strongest indicator of rhoticity in adult speech, i.e. low F3 value (Klein et al., 2012). The importance of F2-F3 distance for the perception of children’s /r/ realisations, at least by expert listeners, seems to be confirmed by a study by Campbell et al. (2017), who recommend the use of a normalised distance between F2 and F3 for providing visual-acoustic biofeedback on the accuracy of children’s production of rhotic lingual approximants.

Another interesting insight into the role of F2-F3 distance in the perception of rhoticity by adults is offered by a relatively recent study by Heselwood and Plug (2011). The authors claim that the closeness of F2 and F3 results in perceptual integration of the two formants and the emergence of a single, dominant formant in the F2 auditory region of the spectrum, which they refer to as “F-rho” (Heselwood & Plug, 2011). According to Heselwood and Plug (2011), it is F-rho that listeners are sensitive to and that is the “crucial auditory correlate” of rhoticity. Therefore, as demonstrated in their experiments involving acoustically manipulated stimuli, reducing F3 amplitude may result in a stronger perception of rhoticity, as it allows for the dominance of F2, and, consequently, of F-rho in the acoustic spectrum. On the other hand, diminishing the contribution of F2 seems to produce the opposite effect (Heselwood & Plug, 2011). Nevertheless, since the respective contributions of F2 and F3 to the perception of rhoticity are a complex issue beyond the scope of this study, for the purposes of acoustic

analysis employed in this research it will be assumed that the overall effect of “F3 dipping sharply into and rising sharply out of approximant /r/” (Docherty & Foulkes, 2001, p. 175) is an adequate indicator of approximant lingual rhotic realisations.

2.2.3 Variation in /r/ realisations in English

Ladefoged and Maddieson (1996) state that it is possible to “exemplify nearly all the different forms of rhotics . . . simply by reference to [different varieties of English alone]” (pp. 235-236). This hardly seems to be a hyperbole, since, being a global language, English can boast a great number of varieties, each with its own distinct palette of sounds; not only is it used as a lingua franca (Jenkins, 2000), but it also allows daily communication among its users both in the Outer Circle and the Inner Circle (Kachru, 1992). This impressive phonetic and phonological diversity is also evident in the accents spoken throughout the United Kingdom, or even just in England itself (J.C. Wells, 1982). Indeed, /r/ is not an exception; even though the most common realisation of /r/ in GB is described as a voiced alveolar approximant (Collins & Mees, 2013; Cruttenden, 2014), there is a high degree of variation, resulting in realisations which are not typically associated with England, e.g. velar or uvular fricatives, which can also be found in some parts of the country (Cruttenden, 2014; Foulkes, 1997; Maguire, 2017).

It is not within the remit of this thesis to provide a comprehensive discussion of *all* /r/ realisations used throughout the United Kingdom. Since this thesis investigates the speech of Polish migrants living in the south-east of England, the main phonological “point of reference” besides Polish will most likely be the “standard” variety of British English typically used in the media and by many educated speakers mainly in the south-east of England, not only because this is the variety all the participants are likely to be exposed to in the host country, but also because it was, and still is, used as a model in EFL classrooms in Polish migrants’ home country (Waniek-Klimczak & Zajac, 2017). Nevertheless, other /r/ realisations which the participants may have encountered in particular contextual styles or “non-standard” varieties will also be reviewed briefly.

Moreover, it has been felt that, due to its significant presence in the media as well as its potential appeal to Polish speakers of L2 English as “the easier” accent (Spiewak & Golebiowska, 2001), /r/ variants employed in American English will also be discussed. One more reason for reviewing studies dealing with American English /r/ realisations was that, unlike in the case of GB, there exists a comparatively large body of empirical research

yielding both articulatory and acoustic data, providing insight which may be necessary for data analysis in this study.

2.2.3.1 British English

2.2.3.1.1 *The “Standard” Variety of British English*

Before turning to /r/ variation in England, it is necessary to establish what is meant by “the standard accent” and clarify some of the confusion regarding the use of terms such as Received Pronunciation and General British.

Until fairly recently, the prestigious accent of British English which was, and occasionally still is, considered standard was known as Received Pronunciation (RP). The term became well-established in early twentieth century thanks to the publications of the renowned British phonetician Daniel Jones and his followers. According to Cruttenden (2014), the status and popularity of the accent itself increased significantly with the onset of BBC broadcasting in the 1920s. Although technically the BBC had no formal policy which would explicitly favour RP, it still exposed the listeners to this variety by recruiting presenters from the social group which used this accent (Cruttenden, 2014, p. 77). However, today the term RP is somewhat controversial, in that some linguists use it in a very narrow sense, to denote exclusively the very conservative variety of British English described by Jones (1909), which currently survives only in old BBC recordings, and the progressively diminishing group of usually elderly, public school-educated speakers. Other authors, however, use the same term, although usually with some modification, for a wide range of accents related to the aforementioned ‘posh’ speech: for example, (J.C. Wells, 1982) uses terms ‘u-RP’ or ‘upper-crust RP’, ‘mainstream RP’ and ‘adoptive RP’, while Gimson (1988, as cited in Hughes et al., 2012) writes of ‘conservative RP’, ‘general RP’ and ‘advanced RP’. To complicate matters even further, different terms for the current standard variety have also been used in more recent phonetics/phonology textbooks and English pronunciation course-books (aimed at foreign learners). For example, Collins and Mees (2013) propose the term NRP, or “Non-Regional Pronunciation”, while e.g. Hewings (2007) and Roach et al. (2003) write of “BBC English”.

It is due to this confusion, caused by the inconsistent usage of the term “RP”, as well as the objections, or even hostility, that the term raises due to its elitist connotations, that in the latest edition of his book, Cruttenden (2014) abandons the “RP” label in favour of “General British” (GB), which he simply calls “the successor to RP” (p. 6). This study has adopted

Cruttenden's terminology and does not employ any other terms for the accent considered standard in England, unless it is referring to sources in which the authors themselves employed those terms.

2.2.3.1.2 *The Accent of the Home Counties Modern Dialect Area*

While GB is claimed to be a non-regional accent used throughout the United Kingdom (Cruttenden, 2014), it is clear that the origins of its predecessor, RP, are strongly linked to public schools and the speech of the south-east (Hughes et al., 2012). Similarly, while describing GB as a non-regional variety, Cruttenden (2014) himself admits that “there are lesser numbers of speakers of GB” in areas other than the south-eastern part of England (pp. 80-81).

Therefore, since all the participants in this study live and work in what is referred to as the Home Counties Modern Dialect Area (Ryfa, 2012), it could be assumed that they would be, albeit in varying degrees, exposed to GB, or accents relatively close to GB, not only through media, but also through their social networks. Nevertheless, it is hardly possible to single out one accent of English as unquestionably dominant in the Southeast.

Another variety that has been reported by the media as gaining popularity and replacing other accents in the region is the so-called “Estuary English” (Rosewarne, 1994). However, (Ryfa, 2012) refers to it as “pseudo-variety” and points out that a number of accent features associated with Estuary English, such as e.g. t-glottaling, have in fact existed in other varieties before the term came into existence. Similarly, Przedlacka (2002) convincingly argues that Estuary English is not a uniform new variety, but rather a number of sound changes spreading independently into the Home Counties most likely due to the influence of London speech, which is consistent with the findings of Williams and Kerswill (1999), which regard the spread of language change and the effects on the speakers in Reading. It is not within the remit of this thesis to dispute the legitimacy of the term Estuary English; for the purposes of this research it is sufficient to acknowledge that in terms of its phonological features, it has been described as an amalgamation of RP and Cockney (Rosewarne, 1994), and, like those accents, it is non-rhotic.

It is not possible to point to a single variety of English as representative of the south of England. This is partially due to the fact that the Southeast is a “fuzzy” concept, as it has been affected by a number of relatively recent social, political and economic changes; as a result, one deals with a range of “Englishes . . . rather than English . . . of the Southeast” (Ryfa,

2012). Nevertheless, it is possible to identify certain linguistic variables as characteristic of the region. In this case, it seems legitimate to assume that through their interactions with local people as well as through the use of the English media, the participants in this study were mainly exposed to non-rhotic or variably rhotic accents (see section 2.1.5.1) and approximant realisations of prevocalic /r/.

2.2.3.2 /r/ Variants in English Accents in England

2.2.3.2.1 *Post-alveolar Approximant*

Especially in older literature, the term “semi-vowel” is used to refer to GB /r/ (Cruttenden, 2014). This was due to the fact that the sound meets the phonetic criteria which define vocoids; it is oral, median (during production air is released along the central mid-sagittal line of the tongue), continuant, and frictionless (Cruttenden, 2014, p. 27). In GB /r/ is a consonant *phonologically*, i.e. it does not function as syllable nucleus (as opposed to GA, where it can be also be syllabic (Collins & Mees, 2013).

Phonetic literature as well as phonetics and phonology textbooks (Ashby, 2013; Collins & Mees, 2013; Cruttenden, 2014; Foulkes & Docherty, 2001; Ladefoged & Maddieson, 1996) identify the post-alveolar approximant as the main realisation of /r/ in English as spoken in England. In GB, the post-alveolar /r/ has three allophones, which exist in complementary distribution: [ɹ], “the most common”, voiced and frictionless allophone; [ɹ̥], a devoiced fricative which follows /d/; [ɹ̥̥], a devoiced fricative which follows stressed /p, t, k/ (Cruttenden, 2014; Hughes et al., 2012).

The values of F1 and F2 vary between 120 and 600 Hz and between 700 and 1,200 Hz, respectively (Cruttenden, 2014). The variant is usually accompanied by lip rounding, which means that it is characterised by two anterior constrictions in the vocal tract; according to (Foulkes & Docherty, 2000), this may account for the fact that acoustic energy in the higher frequencies of the spectrum is often very weak. According to Zawadzki and Kuehn (1980), as cited in (Foulkes & Docherty, 2000), the lip rounding is usually reduced in postvocalic /r/, which results in the raising of all formants.

The key characteristic of the postalveolar [ɹ] is the low F3, which is close to F2 (Cruttenden, 2014; Docherty & Foulkes, 2001). This decrease in F3 is linked to the degree of movement of the tongue (Ladefoged, 2003) and the lips (Docherty & Foulkes, 2001): the larger the articulatory movement, the more significant the drop in F3 value. Consequently, due to

coarticulatory modification, when [ɹ] is surrounded by other segments, articulatory targets are less likely to be achieved, which results in higher F3 values for intervocalic /r/ than for the initial one (Docherty & Foulkes, 2001).

2.2.3.2.2 *Retroflex Approximant*

Another approximant, the retroflex [ɻ], has been attributed to the accent spoken in the South West of England (Collins & Mees, 2013; Cruttenden, 2014; Wagner, 2012), the region referred to as the West Country. As discussed before, this part of England has been traditionally rhotic (see section 2.1.5), with /r/ realised as a retroflex approximant and often colouring its phonetic environment. These qualities produce an effect typically referred to as the “West Country burr” (Wagner, 2012).

2.2.3.2.3 *Alveolar Tap*

The alveolar tap represented by the symbol [ɾ] is yet another English-English realisation of /r/ acknowledged in literature. In GB, its presence seems to be limited only to very specific styles: according to Lindsey (2013) it is employed in the English of classical actors and singers and some of the upper-classes. In terms of phonological contexts, it is most likely either intervocalically following a stressed vowel (e.g. in “very”), or word-initially in consonant clusters, especially following a dental fricative, e.g. in “three” (Hughes et al., 2012; J.C. Wells, 1982) or bilabial or velar plosives, e.g. in “bright” or “great” (Cruttenden, 2014). Even though a few decades ago this realisation was to some extent still associated with upper-class speech (J.C. Wells, 1982), it is now recognised as obsolete or, at the very least, “rare even in emphatic pronunciations” (Hughes et al., 2012) and labelled as “old-fashioned” (Collins & Mees, 2013; Lindsey, 2013).

Nevertheless, the variant still survives in regional dialects: it is employed, although variably, in the West Midlands region (Thorne, 2013), where it seems to be particularly common in the same phonological contexts as discussed above. In addition, according to Cruttenden (2014), it is also the main realisation of /r/ in Liverpool and Newcastle speech.

2.2.3.2.4 *Alveolar Trill*

The trill [r], also known as “rolled” /r/, was, in the words of the renowned British phonetician Daniel Jones, “generally regarded by English elocutionists as the most correct pronunciation of the letter r when followed by a vowel” (Jones, 2018, p. 48). However, if this indeed was the case in 1918, when Daniel Jones’ classic book *Outline of English Phonetics* was

originally published, even then the author acknowledged the fact that, despite being held in such high regard by aforementioned speech professionals, the trill was “not generally used by Southern English speakers” (Dalcher et al., 2008, p. 48), who usually replaced it with the realisation which today is referred to as the postalveolar approximant (Wells, 2010).

Even though more recent sources also acknowledge the existence of the trill in GB, its occurrence is generally restricted to “highly stylised speech” (Cruttenden, 2014), such as stage performance or reciting poetry. In addition, this realisation seems to evoke the same connotations of being “old-fashioned” as the tapped variant.

2.2.3.2.5 *Labiodental Approximant*

Another variant of /r/, which has become recognised as a feature of non-standard varieties in the south-east of England and which has been recently gaining in popularity among younger speakers in different parts of the country (Cruttenden, 2014; Docherty & Foulkes, 2001; Foulkes & Docherty, 2000; Williams & Kerswill, 1999) is the realisation which does not involve any upward curling of the tongue tip (Cruttenden, 2014, p. 85).

Although the sound evidently functions as a member of the class of rhotics for numerous speakers across England, for some reason it has not been included on the list of rhotics by Ladefoged and Maddieson (1996). In addition to that, somewhat confusingly, the sound has been described as either labial or labiodental (Dalcher et al., 2008, p. 64) (p. 64) in literature; this inconsistency is attributed by Foulkes and Docherty (2000) both to inter-speaker variation in labial targets and the fact that based solely on acoustic data, it is not possible to determine whether the variant is produced by retracting the lower lip, i.e. as the labiodental approximant [v], or bilabial constriction, as the bilabial fricative [β]. In order to provide articulatory descriptions for this variant of /r/, articulatory data would be necessary; unfortunately, no such data currently exist either for American or British English (Dalcher et al., 2008). Despite the existing variation and the difficulty in establishing the precise articulation involved, in accordance with the most common practice in phonetic and variationist literature Foulkes and Docherty (2000) propose using the phonetic symbol [v] “as a symbolic shorthand”; this approach will be adopted in this thesis.

[v] used to be stigmatised, and, to some extent, it still is employed for humorous and/or satirical purposes, as evidenced in numerous jokes aimed at famous British public figures who use the variant in their speech, e.g. the Father of the House of Commons, Sir Peter

Hannay Bailey Tapsell (Wells, 2011). [ʊ] evokes associations with “infantilism”, disordered speech and/or “upper-class affectation” (Foulkes & Docherty, 2000). The former two links may be explained by the fact that for many English-speaking children, substituting [w] or [ʊ] for [ɹ] is simply a developmental stage (Foulkes & Docherty, 2000; Knight, 2008). There is evidence in literature that, at least typically, the adult variant [ɹ] does not emerge in child speech until after the age of four, and even then remains highly prone to variation until the age of 6 (Knight et al., 2007). In some cases this “immature” articulation may persist into adult speech and be perceived as a speech defect (Cruttenden, 2014; Foulkes & Docherty, 2001). On the other hand, associations with affected speech of the upper classes were already noted by J.C. Wells (1982) and have a fairly long tradition, with Charles Dickens exploiting this feature for satirical purposes in the speech of his character Lord Mutton in the novel *The Pickwick Papers* in 1836 (Foulkes & Docherty, 2001).

Foulkes and Docherty (2000) hypothesise that the spread of [ʊ] could be linked to a significant influx of Jewish migrants into London in the late 19th century; a suggestion which is supported by Ryfa (2012). According to Foulkes and Docherty (2000), the variant could have initially emerged in the speech of the Jewish community as a result of attempts at modifying the Yiddish [ɣ] towards the English [ɹ], from which it spread into non-standard adult London speech, and, subsequently, into other regional varieties. Williams and Kerswill (1999) demonstrate that [ʊ] is employed in both Milton Keynes and Reading speech, while a number of articles provide evidence for its use in the Midlands and the North (Docherty & Foulkes, 2001; Foulkes & Docherty, 2001; Foulkes & Docherty, 2000). According to Foulkes and Docherty (2000), [ʊ] is slowly becoming an “acceptable variant in mature speech in the south-east” (p. 35), especially among younger speakers (Hughes et al., 2012). These changing attitudes are also reflected in popular media, e.g. Scott (2013). Therefore, Knight’s (2008) prediction that the variant will continue to spread in British English seems well justified.

Unlike [ɹ], [ʊ] is not characterised by the lowering of F3, regardless of the phonological context it occurs in, but rather a decrease in all formant frequencies (Foulkes & Docherty, 2000). This means that acoustic cues for the perception of both sounds are different. Dalcher et al. (2008); Knight (2008) claim that with the increasing role of the labio-dental approximant in contemporary England, the growing exposure to the labiodental variant is beginning to have an impact on the perception of rhotics in England. In Dalcher et al. (2008)’s perception experiment listeners were exposed to a number of stimuli with different

prominence of F2 and F3; the authors conclude that in GB F3 is “no longer a sufficient cue to the /r/ - /w/ contrast” and that “F2 is overtaking this function”, which they attribute to the increasing exposure of speakers to the labiodentals variant (Dalcher et al., 2008).

2.2.3.2.6 Bunched /r/

Although [ɹ] is still regarded as the most prevalent, “standard” realisation of /r/ in GB (see section 2.2.3.2.1), it is by no means the only approximant variant found in England. As previously discussed, the usage of [ʋ] seems to be spreading to different parts of the country (see section 2.2.3.2.5), while [ɹ] remains in use by some speakers from the south-west of England (see section 2.2.3.2.2). There is, however, another approximant variant which is typically associated with American English accents (Cruttenden, 2014) and either only briefly mentioned in English phonetics textbooks (Cruttenden, 2014), or indeed completely omitted (Collins & Mees, 2013), namely the “bunched” /r/. According to Cruttenden (2014), it has been demonstrated that the sound occurs in certain environments in GB, e.g. before front vowels as in “dream”, “curious” (p. 226). The use of the bunched /r/ in GB has also been acknowledged by (2012b) and Wells (2010), with the latter claiming to be a user of the variant himself. Similarly, the British phonetician Prof. Jane Setter admits to using this variant as her main /r/ realisation (Setter, Personal Communication).

However, while an impressive body of literature on the topic exists in the context of American English (Boyce et al., 2015; Delattre & Freeman, 1968; Espy-Wilson, 2004; Mielke et al., 2016; Twist et al., 2007; Westbury et al., 1998; Zhou et al., 2008; Zhou et al., 2007), and there has been a significant number studies in the context of rhoticity in Scottish English varieties (Lawson et al., 2013; E. Lawson et al., 2011; Scobbie et al., 2015), there are, at least to the best of the writer’s knowledge, virtually no studies on the articulatory or acoustic properties of the variant, its social variation or phonological constraints in England, with perhaps the exception of Carter (1999), whose study addresses the latter issue, arguing for the presence of “clear” and “dark”, i.e. apical and dorsal [ɹ] realisations, where the dorsal variant corresponds to bunched /r/, in some varieties of English in England.

This striking scarcity of publications might perhaps be attributed to the fact that, although distinct in terms of articulation, the bunched variant is commonly regarded as perceptually and acoustically similar to (Cruttenden, 2014), or even indistinguishable from (Wells, 2010) the postalveolar realisation, to the point that no separate IPA symbol exists for it (Ball, 2017; Wells, 2010). An alternative explanation could be that the abundance of studies conducted on

the sound's acoustic and articulatory properties in America might have significantly reduced the immediate need for similar studies in the British context.

Regardless of the reasons for the status quo, considering the vast amount of material available on American English /r/, it seems justified to provide an articulatory description of the bunched variants as well as a briefly discuss the issue of their perceptual and acoustic similarity to the postalveolar /r/ in the section dealing with the phonetic variability of /r/ in American English, i.e. section 2.2.3.3.1. However, it should also be noted that the “equivalent” American and British variants are not necessarily identical: one difference briefly mentioned by several sources, albeit supported only with their authors' intuition rather than empirical evidence, is that the English variant most likely lacks the pharyngeal constriction characteristic of its American counterpart (Docherty & Foulkes, 2001; Wells, 2010).

2.2.3.2.7 *Uvular /r/*

The uvular variant may now sound somewhat exotic even to the ears of native English speakers from the Northeast of England, but until relatively recently, i.e. mid 20th century, it was very common in the area, to the point that it was in fact the sole realisation recorded in Tyneside, north Durham and most of Northumberland (Maguire, 2017). The variant is sometimes referred to as the “Northumbrian Burr” (J.C. Wells, 1982) and is described in literature either as a fricative [ʁ], or as having a variable manner of articulation, i.e. either a fricative, or a trill, [R] (Cruttenden, 2014), which perhaps may be explained by the fact that articulating a trill requires meeting very specific articulatory and aerodynamic constraints, which can result in “failed” fricative articulations (see section 2.2.2.1).

Despite its former prevalence in the region, the uvular /r/ is reportedly almost entirely extinct, surviving only in the speech of older speakers in isolated rural locations, including the Holy Island of Lindisfarne, and it is predicted that the variant will soon entirely disappear as a local dialect feature (Maguire, 2017). Due to the sound's strongly localised distribution and its decaying use, it is highly unlikely that the participants in this study would have had any exposure to the variant. Therefore, it is assumed that uvular realisations are of no significance to this study.

This short review of /r/ variants by no means attempts to discuss all possible realisations encountered in native speech in the British Isles, as this is not within the remit of the this study; only the variants occurring within the territory of England have been reviewed.

However, it is worth mentioning that there exists vast body of literature on /r/ articulations in Scottish English accents (Jauriberry et al., 2015; E. Lawson et al., 2011; Lennon et al., 2015; Meer et al., 2021; Schützler, 2010; Stuart-Smith, 2007; Stuart-Smith et al., 2014).

2.2.3.3 American English

Since this thesis investigates the speech of Polish migrants living in the south-east of England, it is likely that the dominant accents of English the participants are exposed to in their daily interactions are accents close to GB, Polish-accented English and other foreign-accented varieties. However, it has been felt that, due to its presence in the media as well as its potential appeal to L2 English users as a rhotic, hence “easier” accent (Jenkins, 2000), GA also has to be included as a potential source of variability in the speech sample analysed.

Even before the last decade of the previous century Brown (1988) observed that foreign learners were increasingly more likely to be exposed to rhotic accents, since American TV and music were “exported in greater quantities than British” (p. 146). According to him, GA’s growing popularity worldwide was also due to the fact that it did not evoke the same negative attitudes in post-colonial countries, e.g. Australia (Brown, 1988). Although GB is still more prevalent in the Polish EFL classroom (Szpyra-Kozłowska, 2018; Waniek-Klimczak & Matysiak, 2016), Polish learners of English often get a significant amount of exposure to American English through song lyrics, radio programmes as well as films (Reichelt, 2005).

Moreover, adopting GA rather than GB can be “easier” for L2 English speakers. According to Spiewak and Golebiowska (2001), American English is easier for Polish learners of British English, who, in case they are willing to adopt the latter, “need to be taught not to pronounce /r/ in word-final position and before consonants” (p. 165). Moreover, GA also has the “advantage” of simpler vowel inventory, which eliminates the need for foreign learners to master the three centring diphthongs (i.e. /ɪə/, /ʊə/, /eə/), as in all, /ə/ is replaced by /r/ (Brown, 1988; Jenkins, 2000). Jenkins (2000, pp. 139-140) even argues that, at least for the English as a Lingua Franca context, i.e. communication between non-native speakers using English as a medium, rhotic GA-type /r/ is *recommended*, since, as she observes, it is “simpler for both production . . . , and for reception, as it is always realized regardless of which sound follows”. Even though this research focuses on migrants who interact with native speakers of GB on a daily basis, some participants, especially those with more

international social networks or those with a penchant for American TV, might adopt some features of GA, such as rhoticity, into their own speech.

2.2.3.3.1 /r/ Variants in American English

As mentioned before, North American accents are largely rhotic, with the southern United States and eastern New England variably non-rhotic (Eberhardt & Downs, 2015; Kreidler, 2008; Labov, 1972). According to Eberhardt and Downs (2015), in areas such as New York, Boston, and New England, non-rhoticity used to be an index of prestige; however, over time it has lost this status and has now become stigmatized.

Those areas of the USA in which rhotic varieties are spoken mostly make use of an approximant rhotic (Ladefoged & Maddieson, 1996). Most likely due to the limitations of technology at the time, early descriptions of American English /r/ focused on the position of the tongue (Delattre & Freeman, 1968) and generally mentioned only two “canonical” types (Mielke et al., 2010), a retroflex /ɾ/ and a “bunched” variant. The retroflex variant was regarded as the main articulation (Delattre & Freeman, 1968), while the bunched or dorsal realisation was also referred to as “dorsal”, “back”, or “molar” /r/ (Catford, 2002) and regarded as the secondary variant. It was not until recording X-ray films became possible that the true range of variation in American English /r/ was documented.

It is through using X-ray, sound and video recordings that Delattre and Freeman (1968) collected data for their seminal study providing exploratory descriptions of various types of /r/ realisations in the main varieties of American English. Delattre and Freeman (1968) analysed speech data from 46 male informants: 43 speakers of American English and 3 speakers of British English from Liverpool. The stimuli comprised 32 words with /r/ in different positions, accounting for its position in the syllable, proximity to different vowels and consonants, as well as stress. This resulted in the following categories:

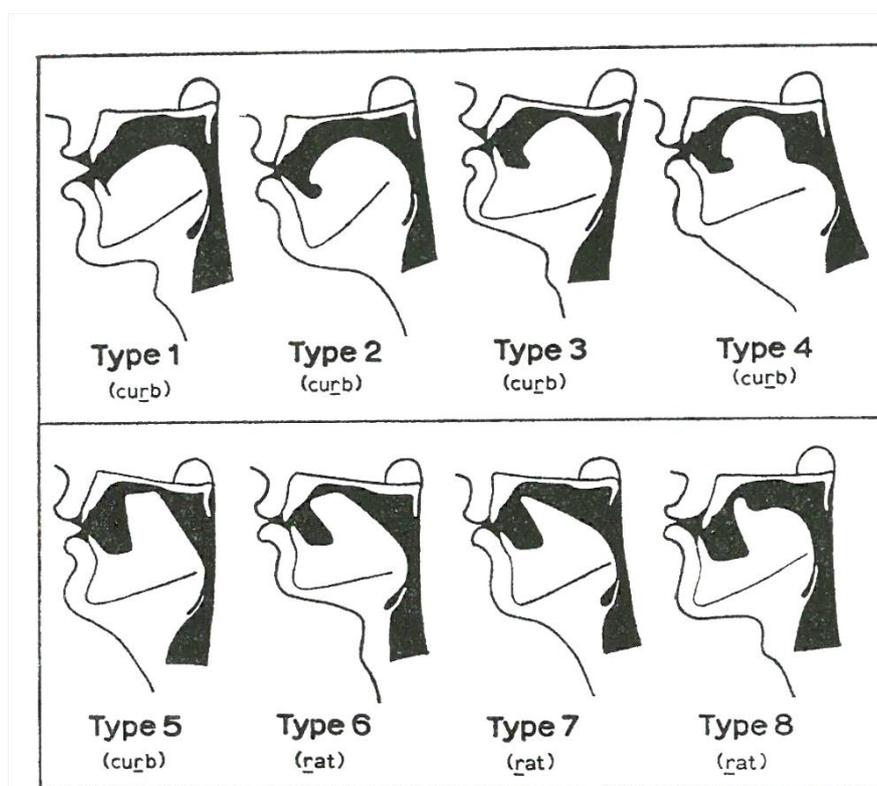
- pre-consonantal (after front, centre, and back vowels, combined with bilabial, apico-alveolar and dorso-velar consonants);
- inter-consonantal (i.e. syllabic [ɹ], combined with bilabial, apico-alveolar and dorso-velar consonants);
- post-consonantal (before front, centre and back vowels, combined with bilabial, apico-alveolar and dorso-velar consonants);
- intervocalic (following and preceding front and back vowels);

- initial (before stressed front, centre and back vowels, as well as before unstressed front and back vowels);
- final (following stressed front, centre and back vowels, as well as a stressed or unstressed syllable nucleus) (Delattre & Freeman, 1968) pp. 39-40.

Based on their data, Delattre and Freeman (1968) identified eight basic articulatory configurations for producing /r/, six of which were employed in American English (Types 2-7) and two of which were almost exclusive to British English (Types 1 and 8), and which were included in the study for comparison purposes: they are all presented here in Figure 8 below. It is important to point out that the types identified and described by Delattre and Freeman (1968) are “types”, i.e. categories comprising different sounds sharing similar qualities; by no means are they the only six variants employed in American English. Consequently, intermediate realisations, i.e. ones deriving their characteristics from different types identified, were also present (Delattre & Freeman, 1968).

Figure 8

Main tongue Shapes for American English and British English /r/



Note. Main tongue shapes for American English (2-7) and British English (1 & 8) /r/ in X-ray motion pictures (Delattre & Freeman, 1968).

Types 2 – 7 were all found in American English. Type 2, “weak American /r/”, which involves a considerable withdrawal of the tip of the tongue from the lower teeth, a wide constriction between the dorsum and the palato-velar vault, a wide pharyngeal constriction and spread lips, was according to Delattre and Freeman (1968) limited to non-rhotic American English varieties only, i.e. Eastern New England and the Coastal South. Type 3, “dorsal bunched”, was identified as “the most commonly used /r/ in America”. It is articulated with a withdrawn, lowered apex, the dorsum raised, the root forming a narrow constriction in the pharynx and a frequent close rounding of the lips (Delattre & Freeman, 1968, p. 43). Type 4 also involves raising of the tongue dorsum, but is characterised by an even stronger contraction of the tongue and a “dip” in the back of the tongue, between the palato-velar and the pharyngeal constriction, resulting in “a stronger” auditory impression and, acoustically, very low distance between the third and the second formant (Delattre & Freeman, 1968, p. 44). Types 5 and 6 (the latter labelled as “fronted bunched”) both involve raising of the tongue blade. However, Type 5 involves a constriction in the palato-velar region and, like Types 2-4, raising of the dorsum or the blade, but not the apex of the tongue. Just like Type 4, Type 5 can be also articulated with a dip between the palato-velar and the pharyngeal constriction (Delattre & Freeman, 1968). On the other hand, Type 6 makes involves a constriction in the postalveolar/pre-palatal region and involve apical articulation as well as, in some cases, the tongue blade. Finally, Type 7 involves a degree of retroflexion; referred to as “apical retroflex”, it is mostly articulated with the tongue rising directly from a low-flat position, but can also be produced by withdrawing the tongue to the position characteristic of Type 3, and a subsequent raising of the tip and lowering of the dorsum (Delattre & Freeman, 1968).

An important characteristic shared by all the six types of American /r/ is the presence of a constriction in the pharyngeal region, which makes them distinct from the two British realisations in the study (Types 1 and 8) (Delattre & Freeman, 1968). In addition, it was found that lip rounding occurred for every type of /r/ in the pre-stress prevocalic context, while it was absent for every type in all other positions for most of the participants (Delattre & Freeman, 1968, p. 45). Since all the informants (even including the British ones) demonstrated lip rounding when producing /r/ before stressed vowels, with the strongest labialisation occurring in word-initial and intervocalic positions (e.g. “read”, “arrest”), (Delattre & Freeman, 1968) were able to conclude that /r/s in those positions in the syllable have lower F1, F2 and F3 values than in other phonological contexts.

More recent literature largely confirms the articulatory characteristics of American English /r/ as described by Delattre and Freeman (1968), although Mielke et al. (2016) criticise the study by pointing out that it failed to represent the timing of the articulatory gestures involved. Nevertheless, Docherty and Foulkes (2001); Espy-Wilson (2004) agree that American English /r/ realisations typically involve not only a constriction along the palatal vault, but also a narrowing in the pharynx and a constriction at the lips, i.e. protrusion and/or rounding. Moreover, those articulatory configurations can differ in terms of articulators involved (i.e. the tongue tip and the alveolar ridge, the tongue tip and the palato-velar region, tongue dorsum and the palato-velar region, or both the tongue tip and dorsum in the alveolar and palato-velar regions respectively) and in terms of the shape of the tongue behind that constriction (flat and sloped downward, slightly curved, humped) (Espy-Wilson, 2004). Considering all these variables, it becomes obvious that, as Ball (2017) observes, “the binary division between apical and bunched . . . [is] somewhat simplistic” (p. 807), and, in fact, a wide range of different /r/ allophones is used in American English, with the “bunched” articulations being overall more common (Delattre & Freeman, 1968; Mielke et al., 2010), but by no means the sole variants in use.

2.2.3.3.2 Internal Variability Constraints on /r/ realiations in American English

A number of studies (Boyce et al., 2015; Delattre & Freeman, 1968; Mielke et al., 2010, 2016; Thorne, 2013; Westbury et al., 1998) have provided evidence of both intra- and inter-speaker variation in /r/ realisations in American English; while some speakers demonstrated strong preference for a specific variant or variants, albeit not necessarily the same as other speakers of the same variety, others employed multiple strategies for /r/ production, demonstrating either free variation, or, interestingly, categorical distribution, thus providing evidence for the existence of internal constraints, i.e. phonetic contexts governing /r/ variability.

Delattre and Freeman (1968) show that overall, the bunched, dorsal variants (Types 2-5) were clearly prevalent in the coda position, while the onset position seemed to allow raising of the apex, which resulted in a somewhat more frequent usage of Types 6-7 than in the coda position. Moreover, those speakers who used the “weak”, Type 2 /r/ post-vocalically tended to use Type 7 (retroflex) pre-vocalically (Delattre & Freeman, 1968).

Westbury et al. (1998), who investigated the differences in lingual articulation for prevocalic /r/, also found that phonetic context had an impact on the tongue shape selected by the speakers. More specifically, the tongue shape employed for stressed, syllable-initial /r/ was somewhat affected by a preceding labial consonant (e.g. in “problem”), to a larger extent by a preceding velar stop (e.g. in “across”), and was the most heavily affected by an alveolar sound (e.g. in “street”) (Westbury et al., 1998).

Finally, a more recent study by Mielke et al. (2010) also provides some evidence of phonetic constraints in approximant /r/ realisations. The study employed ultrasound imaging and Delattre and Freeman’s (1968) “taxonomy” to rate tongue shapes used for /r/ production by 27 students at the University of Arizona. They found that for pre-vocalic /r/, retroflexion was less frequent preceding /i/ than preceding /a/ and /o/, i.e. it was more “discouraged” before close front vowels. Mielke et al. (2010) also report that, in line with Westbury et al. (1998), environments where /r/ is syllable-initial or follows a bilabial consonant are more conducive to retroflexion than contexts where /r/ follows velar or, in particular, coronal consonants. For postvocalic /r/, retroflexion rates were generally low, but higher after /a/ and /o/ than /i/ and, in syllables with an /r/+C rhyme, more frequent before /l/ than any other consonants (Mielke et al., 2010).

Overall, the studies discussed above suggest that retroflexion is encouraged most strongly with back vowels, in word-initial positions and, when in consonant clusters, in the vicinity of labial consonants, followed by coronal, and then dorsal consonants; however, according to Mielke et al. (2016), the findings regarding the interaction with the latter two are not consistent. The impact of those different phonetic contexts on the tongue shape employed for /r/ production is attributed to the effects of coarticulation, where articulatory behaviours are affected by different phonetic environments allowing for varying degrees of “coarticulatory freedom” for the tongue (Westbury et al., 1998). For example, retroflexion is more likely next to word boundaries, labials, or back vowels (Mielke et al., 2010), since these contexts do not involve opposing articulatory demands on the apex. Similarly, the bunched variants are more common next to segments which naturally involve a “bunched tongue body”, e.g. /i/ or /j/ (Mielke et al., 2010).

In addition to the phonetic constraints regarding the allophonic distribution of bunched and apical /r/ observed in American English, it is perhaps worth pointing out here that in their study on /r/ realisations in Scottish English, Scobbie et al. (2015) also discuss the

coarticulatory effects of other /r/s in the vicinity of the rhotic in question. In their data, as speaker had employed an apical variant in “spider”, but a bunched one in “helicopter”, which the authors attributed to anticipatory coarticulation, since the word was immediately followed by the plosive+/r/ cluster in “bridge”.

The studies discussed above provide have provided evidence for phonetic constraints in /r/ variation in American English; however, some of the constraints identified are not only extremely complex, but also highly idiosyncratic, i.e. speaker-specific. Therefore, the question that remains is why various speakers demonstrate different articulatory behaviour in the same phonetic context. Although this issue is beyond the remit of this study, it is perhaps worth pointing out that the question has been addressed in a recent study by Mielke et al. (2016), who reach the conclusion that since, as they claim, the various /r/ realisations are perceptually indistinct (see section 2.2.3.3.4), idiosyncratic /r/ distribution patterns do not become conventionalised, i.e. community-wide allophony patterns do not emerge. Consequently, articulatory choices made by individual speakers are determined not by the variety they speak, but by their individual articulatory motivations and their individual “acquisition trajectories” (Mielke et al., 2016). Although the current study does not employ research instruments allowing for precise description of fine articulatory details, such as ultrasound imaging, the findings of Mielke et al. (2016) indicated that speakers acquisitional trajectories do have a significant impact on their performance, and should therefore be investigated as a potential source of variability.

2.2.3.3.3 *The Issue of Regional Distribution*

Delattre and Freeman (1968) did not provide enough evidence to establish whether the results were indeed indicative of regional variation, or simply a matter of inter-speaker, idiosyncratic variation. This was mostly due to the small sample size and the low number of speakers per region (only 1-3 informants for most dialect areas and 20 only for the South-west). Even though the speakers from California seemed to produce the same type of /r/, the speakers from other regions demonstrated very different speech patterns within each respective location; therefore, no strong evidence for regional distribution was found (Delattre & Freeman, 1968). This issue was subsequently addressed by Westbury et al. (1998) and, more recently, by Boyce et al. (2015). The former study, which involved 28 residents of Wisconsin, 16 participants from seven neighbouring upper-mid-western states and nine from other parts of the USA, found no direct link between the tongue shapes employed for prevocalic /r/ articulation and the regional varieties spoken by the participants (Westbury et

al., 1998). Similarly, based on the data from eight elderly male speakers from the region of Cincinnati, Boyce et al. (2015) conclude that variation in tongue shapes for postvocalic /r/ is likely a matter of individual rather than regional variation. However, given the relatively limited scope of all the studies discussed above, these results should be regarded as only preliminary; Boyce et al. (2015) acknowledge this and state that, in order to reject the existence of regional variation in /r/ realisations in American English, more appropriate, larger-scale research is necessary.

2.2.3.3.4 *The Issue of Perceptual and Acoustic (In)distinctness*

Although approximant /r/ realisations employed in American English demonstrate a high degree of variability in terms articulatory configurations, the prevalent view in literature seems to be that there is little or even no difference between them in terms of both auditory perception and acoustic properties all (Ball, 2017; Cruttenden, 2014; Delattre & Freeman, 1968; Espy-Wilson, 2004; Twist et al., 2007; Wells, 2010), although a few dissenting voices can also be found (Lindsey, 2012b; Zhou et al., 2008; Zhou et al., 2007). The issues of perceptual and acoustic similarity will be briefly addressed below.

In their seminal study Delattre and Freeman (1968) note that “a listener cannot detect by ear whether the /r/s of such words as “pry”, “rat”, “coral”, “arrest” are said with the apex raised or the dorsum raised” (p. 55) and suggest that the lingual approximant /r/ may be the only “clear case” of a consonant with different articulations which “produce the same auditory impression” (p. 30). This corresponds with Mielke et al. (2016), who state that the different realisations of approximant /r/ “do not make a perceptible difference to the listener” (p. 102). Similarly, based on their listening experiment involving 14 native speakers of English and 11 native speakers of Mandarin, Twist et al. (2007) conclude that “speakers are at the best weakly aware of variations in /r/ production” (p. 125). An interesting point regarding the perceptual distinctness of the bunched and retroflex variants is made by Wells (2010), who on his phonetic blog states that any allegedly audible difference between the molar and the postalveolar /r/ is, in fact, solely the result of differences in secondary articulations, such as pharyngalisation or labialisation, rather than the actual lingual configuration; therefore, the realisations become perceptually indistinct when those secondary articulations are removed.

Overall, no convincing evidence for the perceptual distinctness or regional variation in American English /r/s has been found so far. Therefore, it seems that Mielke et al. (2016) were right in that, since the /r/ variants in question are not perceptually distinct, variation

between different types of /r/ is idiosyncratic, and as such bears no social meaning. However, evidence to the contrary can be found in the context of Scottish English.

In their study, E. Lawson et al. (2011) analysed /r/ articulation in adolescents attending two schools in Scotland: a fee-paying school in Edinburgh with mostly middle-class students and a state school in an economically deprived area in Livingston, where students were primarily working-class. Speech data collected from students from each school were subject to both impressionistic and instrumental analysis using ultrasound tongue imaging and grouped into four categories: tip up, front up, front bunched or mid bunched (E. Lawson et al., 2011). The results give evidence for a “socially-stratified continuum” of /r/ realisations, with working class males producing mostly tip-up/front-up allophones, and middle class girls using bunched tongue variants, which give the strongest impression of rhoticity. These findings show that not only is the articulatory difference between the different /r/ allophones perceptible, but it can also serve as a marker of social identity (see section 2.4.3). Similar results were obtained by a series of studies on /r/ articulation in Scottish English (Lawson et al., 2015; Lawson et al., 2013; Scobbie et al., 2015; Stuart-Smith et al., 2014), all of which showed evidence for strongly systematic social variation in lingual shapes for /r/ predicted by social class, which is in opposition to the seemingly idiosyncratic variation in American English.

Since there is evidence (Klein et al., 2012) which demonstrates that not only different listeners make use of different cues, but the relative significance of those cues may change as a result of the listeners’ extensive exposure to different /r/ realisations (see section 2.2.2.3.2), it seems that the issue of perceptual distinctness of lingual approximant variants of /r/ is a complex one, and more research is necessary, particularly in the context of GB. Therefore, for the purposes of the impressionistic analysis employed in this study, no distinction was made between the different approximant realisations of /r/; instead, a single category encompassing all the approximant variants was employed.

As discussed before, many /r/ realisations in English are characterised by low F3 values (see section 2.2.3.2). What is more, Delattre and Freeman (1968) report that spectrogram images of the various types of /r/ in their data demonstrated no significant difference in frequency values not only for F3, but for all of the first three formants, resulting in “very similar, if not for all practical purposes identical, acoustic patterns” (p. 30). This similarity in acoustic patterns could indeed account for the perceptual similarity of the variants; however, the

question it poses is how it is possible for such different lingual configurations to result in such similar acoustic profiles.

While Espy-Wilson (2004) acknowledges this acoustic similarity between the different /r/ realisations, she also points out that “the patterns of F4 and F5 show considerably more variability than those of F1-F3” (p. 64), especially in the intervocalic context. It is this difference in F4 and F5 values that is further investigated by subsequent studies, which argue that there is a consistent difference in F4 and F5 acoustic patterns characteristic of bunched and retroflex /r/ realisations (Zhou et al., 2008; Zhou et al., 2007). Zhou et al. (2008); Zhou et al. (2007) report that the distance between F4 and F5 is larger in retroflex /r/ than in the bunched variant, which, according to them, demonstrates that the two formants “may be robust and reliable indicators of tongue shape” for the two different lingual configurations in question (Zhou et al., 2008; Zhou et al., 2007). However, given that the results of Zhou et al. (2008); Zhou et al. (2007) are based on speech data from six participants only, those findings seem rather tentative and in need of further validation. In addition, as Mielke et al. (2016) convincingly argues, F4 and F5 formant values are not likely to allow listeners to distinguish between the different allophones of American English /r/, as the contribution of the first three formants to speech perception is significantly higher than that of F4 and F5.

Regardless of the somewhat tentative status of the F4-F5 spacing as an indicator of lingual configuration, for the purposes of this study, measuring F4 and F5 would have potentially posed difficulties, as F5 tends to have very low amplitude in /r/ (Espy-Wilson, 2004), as well as both F4 and F5 are notoriously difficult to identify and measure (Zhou et al., 2008). Therefore, for the purposes of the inspection of spectrograms employed in this study, a decision was made not to distinguish between the bunched or apical variants of /r/, but instead use a single category encompassing all approximant realisations.

2.2.4 Phonetic /r/ Variation in Polish and Polish-accented English

2.2.4.1 Polish

Polish is a language with a considerable phonological inventory, especially in terms of fricatives and affricates (Gillian & Jaworski, 2014). It comprises eight vowels and 28 consonantal phonemes (Strutyński, 2006). Like English, Polish only has one rhotic sound in its phonological inventory; however, Polish is one of the relatively rare languages in which the rhotic can occur as the initial element of complex syllable onsets, i.e. followed by a plosive, a fricative or an affricate, as in “rtęć”, “rżeć”, “rdza” (“mercury”, “to neigh”, “rust”)

(Jaworski & Gillian, 2011). Moreover, unlike in English, there has been no evidence of regional variation in /r/ realisations in Polish (Stolarski, 2013b).

According to Wierzchowska (1971), Polish /r/ can be described as a voiced alveolar trill *or* tap, with one or two beats of the apex against the alveolar ridge. However, despite Wierzchowska's (1971) description accounting for some variability in /r/ realisations, the majority of textbooks on Polish phonetics and phonology (with very few exceptions, such as Dudkiewicz & Sawicka (1995)) describe the rhotic exclusively as an alveolar trill (Ostaszewska & Tambor, 2000; Strutyński, 2006) with four different contextual variants. Overall, the Polish allophones of /r/ are claimed to be:

- the voiced alveolar trill [r], which is regarded as the principal member of the category, since it occurs in the largest number of contexts (Lipiec & Więcek-Poborczyk, 2018). Preceding a voiceless consonant in the word-initial position, as in “rtęć” (“mercury”), it occurs in free variation with the devoiced allophone (Szypra-Kozłowska, 2018);
- the devoiced alveolar trill [r̥], which occurs following an obstruent in word final, pre-pausal position, as in “wiatr” (“wind”) and “kadr” (“a shot” in photography), in which case the whole cluster is devoiced, as well as between two voiceless consonants, as in “krtań” (“larynx”) (Ostaszewska & Tambor, 2000; Strutyński, 2006), as well as, in free variation with the voiced alveolar trill, preceding a voiceless consonant in the word-initial position (Lipiec & Więcek-Poborczyk, 2018; Szypra-Kozłowska, 2018);
- the palatalised, voiced postalveolar/pre-palatal trill, which occurs before /i/ and /j/, as in “riksza” (“rickshaw”) and “bariera” (“barrier”) (Ostaszewska & Tambor, 2000; Strutyński, 2006), as well as, in free variation with the voiced alveolar trill, preceding palatal consonants, e.g. in “tarnina” (“bramble”) (Lipiec & Więcek-Poborczyk, 2018);
- the palatalised devoiced postalveolar/pre-palatal trill, which may occur between two voiceless consonants when the following segment is palatalised, as in “mędrkiem” [mɛ̃ntr̥.kjɛ̃m] (instrumental case of “a wise guy”) (Ostaszewska & Tambor, 2000), although this phonetic context is said to be rare in Polish (Lipiec & Więcek-Poborczyk, 2018).

2.2.4.1.1 *The Polish Rhotic: the Trill versus Tap Debate*

The status of the Polish rhotic as a trill is propagated not only by textbooks, but also by speech therapy literature, including not only on-line resources for speech therapists provided both by individual practitioners (Michalak-Widera, 2010; Mieszkowicz, n.d.) as well as official professional bodies, such as the Polish Association of Speech Therapists, but also by academic publications (Budkowska, 2014-2015; Lipiec & Więcek-Poborczyk, 2018). For example, in her research on disordered /r/ realisations in six young Polish adults, Budkowska (2014-2015) states that the only realisation of the Polish rhotic phoneme regarded as “correct” is the trill (p. 56) and labels the apical tap articulations produced by two of the participants as a speech disorder. Similarly, in their literature review on /r/ realisations in Polish, Lipiec and Więcek-Poborczyk (2018) focus on the trill as the sole acceptable variant, while their extensive list of about 30 disordered variants includes taps. Overall, it seems like in the world of Polish speech therapy, the trill is still commonly regarded as the sole “correct”, acceptable realisation of the Polish rhotic.

However, this status quo has relatively recently been challenged by evidence from several studies in the area of phonetics. Jaworski (2010) investigated which phonetic realisations of the Polish rhotic are produced in natural speech in the intervocalic position and whether they are influenced by factors such as stress or speech rate. Based on recordings of 20 sentences read out by four female native speakers of Polish at two different speeds, “natural” and “fast”, (Jaworski, 2010) argued that for native users of Polish trills “better represent the mental representation of the phoneme” than the actual phonetic reality (p. 137), as in natural speech the participants produced very few trills (1.3%) but employed taps (59.5%), fricatives (23.4%) and approximants (15.8%). While there was a significant degree of inter-speaker variability, both the lower speech rate and stress (i.e. placement of the rhotic in the onset of the stressed syllable, as opposed to pre-stress or post-stress position) seemed to encourage tapping rather than the “weaker” variants, fricatives or approximants. Indeed, the results of a subsequent study by Jaworski and Gillian (2011), which also investigated the phonetic realisations of Polish /r/ in the intervocalic context while also taking into account the impact of the neighbouring vowels, demonstrated that none of the eight female participants produced a trill, but rather employed taps or “articulatory undershoot” variants of the tap (see section 2.2.2.1), i.e. fricatives or approximants, with the lenited realisations occurring somewhat more frequently in the vicinity of high close vowels. This led the authors to argue that

“when the Polish rhotic is fully articulated, it should be classified as a tap” (Jaworski & Gillian, 2011, p. 378).

The nature of the Polish rhotic in different phonological environments was also investigated in a series of studies by Stolarski (2013a, 2013b, 2015). All the studies employed very similar methodology: five male and five female adult native speakers of standard Polish were recorded reading out wordlists containing lexical items with /r/ as well as foils. Classification of speech data was mainly conveyed through spectrographic analysis as well as, in some cases, oscillograms and intensity contours (Stolarski, 2013b). Stolarski (2013a) looked at /r/ realisations in the intervocalic position, Stolarski (2015) investigated the post-consonantal position, while Stolarski (2013b) focused on postvocalic /r/ in the pre-consonantal and word-final environments. All the studies provide ample evidence of tapping, with taps accounting for 95% of all tokens in the intervocalic position (Stolarski, 2013a) and almost 79.6% in the post-consonantal position (Stolarski, 2015). For postvocalic /r/, which is of particular interest to this study, Stolarski (2013b) reports that in the pre-consonantal position, taps were, again, by far the most common realisation, comprising 74.4% of the data, which would have been even higher had taps with weak closures been included in the category of taps. Trills accounted for 8.52% of all data, but an additional 3.33% of all realisations was constituted by “intermediate” realisations between trill and taps, i.e. taps followed by “a vocalic element involving friction or approximation” (Stolarski, 2013b). Finally, although in the word-final position trills accounted for 10% of all the tokens; tapped variants were, again, the most frequent, accounting for 80% of all postvocalic word-final /r/ productions. Overall, Stolarski (2013a, 2013b, 2015) argues that although trills do occur in Polish, especially for postvocalic /r/ in the pre-consonantal and word-final positions, taps are significantly more frequent and should thus be regarded as the basis allophone of the Polish rhotic. While other phonetic realisations, such as fricatives and approximants did occur, they were reported to be rare in Polish.

Similar results were obtained by in a more recent and a larger study by Zajac and Rojczyk (2017a, 2017b), which examined /r/ realisations of 26 Polish speakers of English, first year undergraduate students at the English Department at a university in Poland, both in the participants’ L1 (Polish) as well as L2 (English). The participants were asked to read out two sets of sentences containing 24 tokens, i.e. lexical items with /r/ in various phonetic contexts, in both respective languages. The speech data obtained were subject to analysis involving visual inspection of spectrograms and oscillograms. The results demonstrate clearly that the

main realisation of the Polish rhotic is the tap, as it was produced in 82.3% of all tokens, with fricatives and approximants accounting for 11.3% and 6.3% respectively.

Although the studies discussed above could be challenged due to their relatively small sample sizes, the main conclusion all the authors arrive at seems to be consistent, namely that the main realisation of the Polish rhotic is not the trill, but the tap, which itself is also variable. This finding corresponds with Lindau's (1985) observation, who points out that an actual trill realisation of an /r/ is not as common as might be expected from the descriptions of languages, where an /r/ is often labelled as a "trill", which still seems to be the case in Polish. According to her, even in languages where a possible realisation is a trill, not all speakers use it, and the speakers that do, also employ tap and approximant allophones (p. 161). Since trills are challenging in terms of articulation (Dhananjaya et al., 2012; Ladefoged & Maddieson, 1996), and thus prone to phonetic instability, their production often results in lenited variants. As a language whose phonological inventory contains only one rhotic sound, Polish seems to be particularly prone to lenition, as despite a high degree of phonetic variability in /r/ realisations, phonological contrasts in such languages remain intact (Jaworski & Gillian, 2011).

As Jaworski (2010) states, for Poles the trill functions as a mental representation of the phoneme, which is why, as he argues, when asked to produce a Polish rhotic in isolation, they will almost invariably produce a trill. However, based on the evidence from the studies discussed above, it seems like the status of the trill as the "only correct variant" of the Polish rhotic (Budkowska, 2014-2015) is little more than a fantasy, or a linguistic stereotype (Labov, 1972; Szpyra-Kozłowska, 2018); a feature that exists in the collective consciousness of the speech community, but which has almost certainly fallen out of use except for declamatory style and emphatic speech, particularly swearwords (Jaworski & Gillian, 2011). One might ponder why such a belief is so prevalent in the field of speech therapy and is only being questioned by phoneticians. This perhaps stems from the inherent difference in attitudes between the two related fields; while, due to the very nature of their work, speech therapists adopt the prescriptive approach, linguists tend to follow the descriptive approach, and, as a result, challenge the status quo. Nevertheless, in this case, adhering to an obsolete belief about a language feature results in the stigmatisation of phonetic realisations which, in reality, seem to be used by the majority of the population.

2.2.4.1.2 Evidence of Social Stratification

Interestingly, while none of the studies discussed above report on any evidence of regional distribution of /r/ realisations in Polish, there is some tentative evidence of social stratification both in terms of gender and age. Stolarski (2013b) points out that the male participants in the study tended to pronounce /r/ “less clearly” than the female ones, with women’s articulations being characterised by a higher strength of closure and a lower rate of lenited variants, while Jaworski and Gillian (2011) report that the adult speakers in their study were overall less prone to lenition than teenage speakers, which, according to the authors, might be indicative of a language change. However, bearing in mind the small number of participants in those studies it is impossible to make any strong generalisations. Nevertheless, this highlights the need for the present study to consider the existence of similar patterns in the L2 English of Polish migrant in the current study.

2.2.4.1.3 Other Polish /r/ Realisations: Fricatives and Approximants

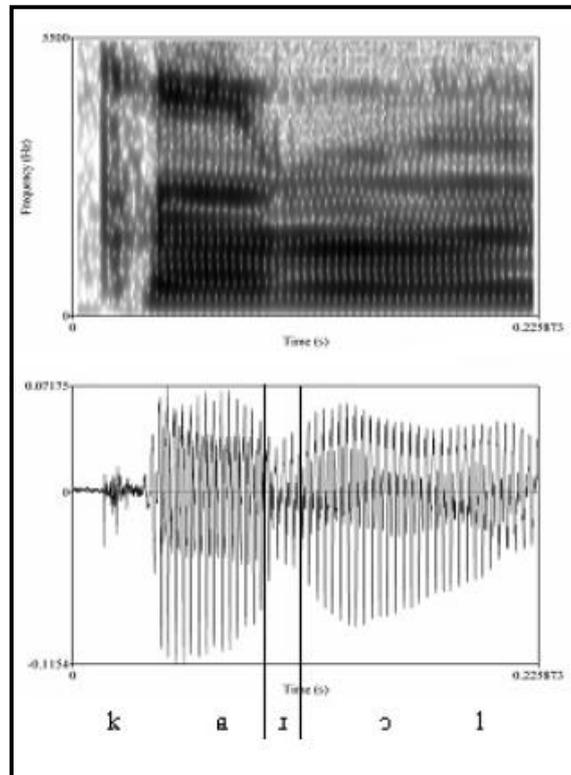
Alongside trills and taps, the studies cited above mention also fricatives and approximants as potential variants of the Polish rhotic. However, to avoid potential confusion, it is perhaps worth pointing out here that the Polish /r/ realisations in non-disordered speech referred to using the terms “approximant” and “fricative” in studies on the Polish rhotic (Gillian & Jaworski, 2014; Jaworski, 2010; Jaworski & Gillian, 2011; Stolarski, 2013a, 2013b, 2015) are not identical with “true” fricatives, i.e. allophones of the Polish fricatives which do not belong to the class of rhotics, or rhotic fricatives and rhotic approximants found in some other languages, e.g. French and English, respectively. This is due to the fact that in Polish, fricatives and approximants which function as realisations of /r/ are the result of lenition and are, essentially, “articulatory undershoots” of taps. As mentioned before, taps are characterised by a very short constriction interval of 30-40ms due to the brevity of the apical gesture (see section 2.2.2.2). Therefore, it is expected that the duration of the “underarticulated” taps, i.e. realisations lacking complete or, indeed, any form of closure, will be shorter than the duration of segments where a fricative or an approximant is the intended articulatory target.

Another difference between the Polish “approximants” and English approximant /r/ realisations is that, as evident on the example from Jaworski’s (2010) data on intervocalic /r/ realisations in Polish, the approximant variant resulting from the lenition process lacks the typical F3 lowering characteristic of English /r/ realisations. In fact, none of the formant

values except for F4 seem to change, which perhaps could be explained by the brevity and the vowel-like nature of the incomplete closure.

Figure 9

Approximant Rhotic in the Polish Word “Karol” (“Charles”)



Note. Approximant /r/ in the Polish word Karol (Charles), as pronounced in fast speech by a native speaker of Polish (Jaworski, 2010); there is a lack of the typical F3 lowering.

2.2.4.2 Polish-accented English

As mentioned before, the existing body of literature on rhoticity in Polish-accented English is relatively small. Nevertheless, based on those limited sources as well as the researcher’s experience, it seems like there is a discrepancy between some of the existing descriptions of or notions about Polish-accented English and what Polish speakers of L2 English actually sound like.

In the chapter on Polish learners’ potential problems with English in the book *Learner English: A Teacher's Guide to Interference and other Problems*, Spiewak and Golebiowska (2001) states that one of the features of Polish learners’ English accents is “a prominent rolled /r/”, particularly in the word-final position (p. 162). Similarly, a popular English pronunciation textbook *Ship or Sheep?* identifies “strongly rolled or pronounced where

normally silent” /r/ as one of potential challenges facing Polish learners of English (Baker, 2006).

Indeed, in the researcher’s experience, many Polish speakers of English describe Polish-accented English as characterised by trilled or tapped realisations. This belief seems to be shared by many British and American citizens as evidenced in numerous TV and radio programmes. For example, in her analysis of “fake” Polish accents employed by international cast in the film *The Zookeeper’s Wife*, trilled /r/ realisations occur with similar frequency as approximants, with some actors consistently employing trills regardless of the phonetic context (Szpyra-Kozłowska, 2018). This suggests that the rhotic may have an indexical function (see section 2.4).

One of the aims of the current research project is to explore the quality of /r/ realisations in the L2 English of Polish migrants living in the south-east of England. While reporting on an ongoing project, Zajac (2016) refers to her previous research, stating that “Polish-like” alveolar trills were “extremely rare” in the speech of Polish learners of English living in Poland. Zajac and Rojczyk (2017a, 2017b) builds on that research and concludes that the most frequently occurring realisation of /r/ was in fact an approximant, accounting for 98% of all the tokens, followed by fricatives (1.7%) and taps (0.3%). However, it is perhaps of significance that the study analysed the speech of university students of English in Poland, i.e. adults with, presumably, relatively high levels of interest in the language as well as a high proficiency required to study English at the university level. Therefore, it is possible that the production of lower level speakers’ with different motivations would differ from the results presented in Zajac and Rojczyk (2017a). However, another study by Waniek-Klimczak and Matysiak (2016) reports that Polish migrants living in the UK displayed a strong tendency to use retroflex approximant [ɻ] rather than a tap [ɾ] regardless of their proficiency level.

However, Szpyra- Kozłowska’s (2018) investigation of rhoticity in L2 English of Polish secondary school students at the pre-intermediate level provides some evidence for trilled realisations, albeit only in the speech of two out of 25 participants. Although, similarly to the studies discussed above, the main /r/ realisation in the study was the approximant, followed by fricatives and taps (the exact percentages of each type of /r/ realisation were not provided in the article), the two participants who produced trilled realisation did so consistently, regardless of the phonetic context (Szpyra-Kozłowska, 2018). Speculatively, this somewhat

surprising consistency with which the variant was produced could perhaps be explained by the teenage students' attitudes to the subject and/or the research project they had been requested to take part in by their school teacher, which, again, might be an indication of the indexical function of the "Polglish" rhotic as a stereotype. Alternatively, the presence of trilled variants in this speech data of pre-intermediate learners of English might also mean that lower-level learners, i.e. lower than the university students of English in Zajac and Rojczyk (2017a) are more prone to variability in /r/ realisations.

Overall, the studies discussed above indicate that L2 English /r/ realisations of Polish speakers generally lack the stereotypical trill; in fact, notwithstanding the issue of distribution, i.e. rhotic versus non-rhotic, the variants employed seem to be closer to those encountered in the "standard" varieties of British or American English rather than the speakers' L1, which suggests that interference from the speakers first language does not play a significant role. Szpyra-Kozłowska (2018) attributes this to the fact that mastering the English approximant "is easy for Polish learners" even at the pre-intermediate level. This statement echoes Budkowska (2014-2015) who claims that, since the English postalveolar approximant requires a similar articulatory configuration to the Polish fricative [ʐ], with some training, Polish learners of English may find it relatively easy to acquire.

Nevertheless, despite the low rates of trilled realisations encountered in Polish-accented English, there seems to be some degree of variability in /r/ productions. Therefore, the relationships between the participants' level of English, the potential indexical function of the rhotic and the phonetic variants employed by Polish speakers of L2 English need to be explored further.

2.2.5 Summary and Related Research Questions

English seems to be a particularly rich language when it comes to the diversity of rhotic sounds in its numerous varieties (Ladefoged & Maddieson, 1996). Even focusing on the various accents used in England alone, the range of articulations is rather impressive, from relatively obsolete taps (Collins & Mees, 2013) to still-expanding "labiodental" realisations (Docherty & Foulkes, 2001; Foulkes, 1997; Foulkes & Docherty, 2001; Foulkes & Docherty, 2000). However, considering the fact that the participants in this study live and work in Reading or London, it could be assumed that, through their daily interactions, they are mainly exposed to the "standard", postalveolar approximant characteristic of GB (Ashby, 2013; Collins & Mees, 2013; Cruttenden, 2014; Foulkes & Docherty, 2001; Ladefoged &

Maddieson, 1996); however, it is possible that in their interactions with older (i.e. above the age of 70), working-class locals they might still be exposed to rhotic, retroflex approximant realisations (Trudgill, 2000a; Williams & Kerswill, 1999), while through contact with younger locals they might encounter the “labiodentals” variants (Foulkes & Docherty, 2000; Williams & Kerswill, 1999). In addition, since there are no data regarding the geographical distribution or social stratification of the bunched variant in England, it could be assumed that the participants may have also been exposed to this variant.

Despite the frequent claims that the Polish rhotic is mainly realised as a trill (Lipiec & Więcek-Poborczyk, 2018; Ostaszewska & Tambor, 2000; Wierzchowska, 1971) there is ample evidence from more recent phonetic studies that the dominant variant in Polish is, in fact, a tap and its lenited variants (Gillian & Jaworski, 2014; Jaworski, 2010; Jaworski & Gillian, 2011; Stolarski, 2013a, 2013b, 2015). It is therefore expected due to the effects of language transfer, some participants may employ /r/ realisations more similar to those employed in their L1 than in English.

Considering the diversity of /r/ realisations the participants are exposed to in England, as well as the potential transfer from their L1, i.e. Polish, the following research questions emerge:

What is the main non-prevocalic /r/ realisation in L2 English speech of Polish migrants living in the UK?

Are Polish migrants living in the UK consistent in terms of their choice of non-prevocalic English /r/ realisations, or are they variable?

It is important to point out that the focus here is not on precise phonetic realisations, but rather on the choice of more “native-sounding” or more “Polish-sounding” realisations and the factors conditioning those choices. This is mainly due to inclusion of the sociolinguistic dimension to the study, but also partly due to the limitations of impressionist and spectrographic analysis.

Moreover, there is evidence for the existence of phonetic constraints which govern the use of specific /r/ realisations. These could be systemic, like those governing the distribution of fricated and approximant /r/ in GB Cruttenden (2014), or somewhat idiosyncratic, like those governing lingual configurations for approximant /r/ in American English (Mielke et al., 2016). These include the effects of preceding vowels, syllable positions and, in consonant clusters, the vicinity of specific types of consonants. Another potential constraint is the

vicinity of another /r/, which is a conditioning factor both in the different tongue shapes employed in Scottish English (Scobbie et al., 2015), but also impacts the use of /r/ sandhi in GB (Hannisdal, 2007).

There is also some evidence on the effects of phonetic environments on /r/ realisations of postvocalic /r/ in Polish: the vicinity of sonorants favours fully articulated taps (i.e. more complete closures) more than the vicinity of obstruents, and the proximity to alveolar sounds encourages the lenited realisations, conducing to greater variability (Stolarski, 2013b). Moreover, it is in the context of the pre-consonantal and word-final postvocalic /r/ that the occurrence of trills and trill-like realisations are the most common (Łobacz, 2000; Stolarski, 2013b).

Nonetheless, many of those constraints mentioned above are related to /r/ in general, including word-initial or intervocalic /r/. Since the remit of the current study is the non-prevocalic /r/ only, the subset of constraints relevant to this study is relatively small, and could be summarised as follows:

- stressed syllables; based on their analysis of rhotics in the speech of nine British English speakers and 11 American English speakers, Love and Walker (2013) observed lower F3 values, i.e. a stronger impression of /r/-fullness in stressed syllables;
- syllable structure, i.e. open and closed syllables; evidence from the variably rhotic variety that is Jamaican English provided by Wells (1982a) shows that speakers articulate the postvocalic /r/ in the word-final position, e.g. “far” [fa:r], but not in the pre-consonantal position, e.g. “farm” [fa:m];
- the quality of the preceding vowel; Mielke et al. (2010) report that in American English speakers, the degree of retroflexion was higher after /a/ and /o/ than /i/; a similar finding was reported by Love and Walker (2013), who observed lower F3 values after back vowels. In addition, Wells (1982a) states that some speakers of American English articulate postvocalic /r/ in mid central vowels [ə] and [ɜ:], i.e. NURSE and lettER words, but not in other phonological contexts (Wells, 1982a);
- the following consonant, i.e. place of articulation; this constraint has been reported by for both American English and Polish. Mielke et al. (2010) observe that in syllables with an /r/+C rhyme, retroflexion rates were higher before /l/ than any other consonants, while Stolarski (2013b) states that the vicinity of post-dental, alveolar,

post-alveolar and palato alveolar consonants, i.e. ones articulated with the apex or the blade, discouraged the use of taps, while encouraging greater variation in /r/ variants, including the use of otherwise rare trills;

- the presence of another /r/ in the vicinity; evidence from Scottish English discussed by Scobbie et al. (2015) suggests that due to coarticulatory effects, the realisation of a non-prevocalic /r/ can be influenced by the presence and the choice of variant for another /r/ in its vicinity.

The research question that emerges is as follows:

Are there any phonetic constraints on variability in /r/ realisations?

Based on the constraints summarised above, it could be expected that Polish migrants living in the UK

- may produce a stronger impression of /r/-fullness in stressed syllables;
- may be more likely to pronounce the postvocalic /r/ in the word-final position than in the pre-consonantal position;
- may produce more /r/-full variants following back vowels and mid central vowels [ə] and [ɜ:];
- may produce fewer taps but more trills in the vicinity of post-dental, alveolar, post-alveolar and palato alveolar consonants or produce impressionistically stronger approximants higher before codas ending in /l/;
- may be influenced by the presence of another /r/ in the vicinity of the non-prevocalic /r/.

Nonetheless, these predictions must be approached as extremely tentative, as it is not possible to establish a priori whether L2 English speech of Polish migrants living in England is governed by the grammar of their L1, L2 or some form of interlanguage (Selinker & Gass, 2008). In addition, even if some of the constraints discussed in literature are indeed identified in the data collected, as discussed above, they may not be relevant for the whole cohort, but rather different constraints may be adhered to by different individuals.

Brown (1988) states that rhoticity of speakers of L2 English depends on the pronunciation model they have adopted and the phonological transfer from their L1. However, as demonstrated by the studies discussed above many more factors seem to be at play, especially

that the choice between rhotic on non-rhotic forms has, at least according to Brown (1988), no impact on intelligibility of L2 English speakers. As evident in the literature reviewed (Szpyra-Kozłowska, 2018; Waniek-Klimczak & Matysiak, 2016; Zajac & Rojczyk, 2017a) and the author's personal experience, L2 English users from Poland adopt different strategies. Even though the effects of language transfer are expected, perhaps in combination with the effects of phonetic context, considering the fact that different speakers with the same L1 display different articulatory behaviour in the same phonetic context in L2, it is clear that other factors must be also at play.

Although learner differences undeniably play a crucial role in L2 acquisition (Dörnyei, 2006), for practical reasons a decision was made not to extend the scope of the study to include psycholinguistic constructs such as phonological memory (Carroll & Sapon, 1960), phonetic ability (Jilka, 2009) or talent (Jilka, Lewandowski & Rota, 2011). Instead, this study focuses on internal as well as social constraints on /r/ variability, while also accounting for the participants acquisitional trajectories.

2.3 Accent and SLA-related Factors

The main focus of the current study is internal as well as socially-conditioned variability in /r/ realisations in L2 English of Polish migrants living in the south of England; in other words, linguistic variability in a second language. However, one of the conditions for a variable to convey higher order indexical meaning (Johnson, 2011; Johnstone, 2009, 2010; Johnstone et al., 2006; Johnstone & Kiesling, 2008; Labov, 1972; Ladefoged & Johnson, 2014; Silverstein, 2003) is that the various ideologically-charged linguistic variants need to be available to the speaker as part of his repertoire. Unless the speaker has productive control over those variants, one cannot speak of intra-speaker socially-conditioned variation, although it should be pointed out that the feature can still convey higher order meaning to a listener. For example, Johnstone et al. (2006) report that in their study of Pittsburghese, a participant used a regional feature not to convey higher-order indexical meaning, but simply because he did not have productive control over the choice of variants of that feature. Similarly, Zuengler (1991) points out that in L2 performance, variability can be developmental, i.e. related to the speakers' acquisitional trajectories, rather than "sociolinguistic" in nature. Therefore, since the acquisition of a variant is a prerequisite for controlled production of socially meaningful variation, it seemed necessary to account for at least the key factors linked to pronunciation in SLA literature.

Flege (2012) discusses the following factors linked to L2 acquisition which have been proposed for more than half a century as affecting learners' success: interference between the L1 and L2, individual differences such as working memory or auditory acuity; age-related phenomena; motivational differences and L2 input. Since all the participants in this study share the same L1, the differences between participants' /r/ variant choices cannot be attributed to their different L1 background, which is why this factor has not been considered relevant for the current study. In addition, individual psycholinguistic differences such as working memory or phonetic ability (Jilka, 2009) are beyond the remit of this study, which focuses mainly on internal and social constraints. The remaining factors related to age, motivation and input will be briefly discussed in the following sections.

2.3.1 Age of Onset, L2 Instruction and Phonetic Training

One of the factors regarded as key in SLA research is the age at which individuals come into contact with L2, either through exposure in naturalistic settings or through formal instruction. Lenneberg's (1967) hypothesis regarding the existence of a critical period in language acquisition influenced a number of researchers, such as Seliger (1978) and Diller (1981), who proposed the existence of multiple critical periods, i.e. ones for the acquisition of L2 phonology, syntax or lexis, arguing that successful acquisition of L2 pronunciation was only possible for young learners. A similar stance was represented by Scovel (1988), who claimed that a critical period existed for pronunciation only. He argued that pronunciation was the only component of language that required "neuro-motor involvement" (p. 101), and therefore was significantly different from its other aspects in terms of neurological correlates, which meant that even successful post-pubescent learners were going to retain a strong foreign accent. However, as Thorsten Piske et al. (2001) claim, "no study has as yet provided convincing evidence for the claim that L2 speech will automatically be accent-free if it is learned before the age of about 6 years and that it will definitely be foreign-accented if learned after puberty" (p. 192).

What a number of studies comparing early and late-onset learners found was that those immigrants who arrived in the L2 country at a younger age were indeed more native-like in terms of their pronunciation. For example, a study involving 240 native Korean immigrants who arrived in the United States between the ages of one and 23 (Flege et al., 1999) showed that the age of arrival was positively correlated with the degree of foreign accent. The idea that younger learners can be more successful is a common approach in SLA, shared by both non-specialists and some specialists alike (Ellis et al., 2005; Kuhl, 2000). However, the

results of a study by Jia et al. (2006) involving Chinese immigrants in the US as well as Chinese students of English in China demonstrated that in the formal instruction setting it was the *older* group who outperformed younger learners, while in the immigration setting the situation reversed with increasing L2 immersion, again confirming the “younger is better” view. Therefore, as Dörnyei (2009b) states, although young learners, who learn mainly thorough implicit learning, are privileged in naturalistic SLA contexts, where they can freely interact with native speakers, late-onset learners, who rely more on explicit learning, may outperform younger learners in formal foreign language instruction (2009, pp. 249 - 252). Although all the participants in the current study were adults who moved to the UK after the age of 19, most of them had received EFL instruction prior to leaving their home country. Therefore, it is expected that individuals who received more instruction at a younger age will be more native-like in terms of their choice of /r/-variants. Nonetheless, since all those participants who learnt English before migrating did so mostly through formal instruction, which seems to favour slightly older learners, a straightforward negative correlation between the age of onset of learning English and native-likeness is not expected.

Another factor that has been identified as significant for the quality of L2 pronunciation of adult L2 speakers was phonetic training. Studies such as Bongaerts et al. (1997) or Birdsong (2007) report that the most successful learners who were able to reach a native-like level of performance had reported having received phonetic training. These results provide some evidence that even post-pubescent learners are not necessarily doomed to fail in L2 accent acquisition, provided they receive phonetic instruction. Since three participants in the cohort have received phonetic training, it is expected that these participants will be less variable in terms of rhoticity and more native-like in their choice of /r/ variants.

2.3.2 Length of Residence and L2 Input

Length of residence (LoR) in the host country is another variable common in SLA studies. However, its effects differ over across studies, with some studies reporting an effect of LoR on L2 pronunciation (Drummond, 2010, 2010b, 2011, 2013; Flege et al., 1999), and other studies not finding any links between the two (Flege, 1988; Flege et al., 2006; Moyer, 1999; Ryan, 2018).

While LoR is a variable that is easy to operationalise, it is problematic for a number of reasons. First of all, there is a lack of consensus about LoR values that are required in order for changes in migrants’ pronunciation to take place. For example, Flege (1988) suggested

that is likely that upon arrival into the host country migrants experience a short period of accelerated learning, which plateaus after about 12 months, which means that LoR values beyond one year would not significantly contribute to L2 phonological attainment. On the other hand, Drummond's research on Polish immigrants in Manchester (2010, 2010b, 2011, 2012, 2013) demonstrates that while LoR positively correlated with more native-like pronunciation, LoR shorter than 2 years showed practically no evidence of any change in pronunciation. It was only LoR of 4-6 years that resulted in significantly higher rates of production of variants similar to the local accent variant. Similar results were reported by Sharma and Sankaran (2011) in their study of British Asian speech in London, where India-born participants showed a similar three-year "lag" in terms of the onset of accent change towards the British variants.

Another issue with LoR is that, according to Flege (2012), it is simply "a crude measure of amount of L2 input", as generally, the longer the length of residence, the larger the amount of L2 input migrants have been exposed to. However, these two variables cannot always be equated, as the relation between them is not linear. Thus, Flege and Liu (2001) state that adults' L2 performance will improve over time only if they are exposed to a significant amount of native speaker input. Indeed, Flege (2012) states that his "hunch" is that since input is crucial for L1 acquisition, it is likely to be the most important predictor of phonological attainment in L2. Therefore, the current study included both LoR as well as L2 input, as operationalised by a number of measures (see the Methodology chapter). Since longer residence might enable more interactions in L2 as well as more passive exposure, it is expected that participants with higher LoR values and higher use of English will be more native-like in terms of their choice of non-prevocalic /r/ variants.

2.3.3 Motivation, Attitudes to Learning, Anxiety

Motivation and attitudes are an integral part of SLA research. One of the most popular models created to account for those is Gardner's Socio-Educational Model (Gardner, 2010; Gardner et al., 1992; Gardner & MacIntyre, 1991, 1993). The model was initially created to account for the variables governing instructed learning, i.e., Anglophone students learning French in Canada. Both the model and the measurement instrument it proposed (the Attitude Motivation Test Battery, abbreviated to AMTB) aimed to develop a scientific basis for the investigation of affective individual differences in second language acquisition. The model proposed six classes of variables, which were: Ability, Motivation, Integrativeness, Educationally Relevant Variables, Language Anxiety and Instrumentality (Gardner, 2010).

Gardner's (2010) research paradigm identifies motivation as one of the most important factors for achievement in second language learning. He also suggests that the motivation for language learning is directly influenced by the student's attitudes towards the learning situation and "Integrativeness", i.e. "the ability to emotionally incorporate material foreign to [the student's] own culture" (p. 26). Integrativeness represents a true interest in learning the second language in order to be able to communicate with members of the target language community (Gardner, 2010). As the learner progresses, the more the learning process involves dealing with "cultural features" of the target language community, and the greater the engagement of the affective element, to the extent that individuals may "experience changes in their self-identity and find themselves identifying in part, at least with the other community" (Gardner, 2010, p. 3). According to Gardner (2010), in its extreme form, Integrativeness may involve complete identification with the target language community, as well as potential abandonment of the speaker's L1 group identity (Gardner, 2010).

Alongside Integrativeness, Gardner's (2010) socio-educational model acknowledges the role of instrumental motivation; nevertheless, it is the former which he recognised as the main driving force behind successful language learning (Gardner, 2010, p.72), while Instrumentality is proposed more as "a potential support for motivation". The reason Gardner (2010) claims it is less significant than Integrativeness is that, according to him, the former is effective only as long as the personal reason for learning the language is being accomplished (p. 25). Nevertheless, according to Major (2001), the difference between the two types of is not a matter of kind, but a degree, and instrumental motivation can also play a part in L2 learners' success.

Gardner's model has attracted a great deal of criticism (Dörnyei, 2009a; Dörnyei et al., 2006). The concept of Integrativeness in particular has been critiqued as enigmatic and having no direct equivalent in mainstream motivational and educational psychology theories. Dörnyei (2009a, p. 29) himself proposed a re-conceptualization of Gardner's model in terms of his L2 Motivational Self System, in which it is "the ideal L2 self" that acts as a powerful motivational factor to "reduce the discrepancy between our actual and ideal selves". However, as MacIntyre et al. (2009) argue, both Gardner's and Dörnyei's theories share conceptual common grounds and are not mutually exclusive: while, as they point out, the latter approach can be used to examine the sources of language learning motivation, the focus of the proposed research will be not the discrepancy between individuals' current and future selves, but the interplay between learners' motivation and attitudes to the target language

group and its culture. Therefore, implementing a methodology based on Gardner's work and its subsequent adaptation by Drummond (2010, 2010b, 2012) seems appropriate for the purposes of this study.

Based on the model, it is expected that migrants with higher Integrativeness scores will again be more native-like in terms of their choice of /r/ variants. Such a result would align with Ryan (2018, 2021), who investigated the acquisition of several local sociolinguistic variables in the speech of 14 teenage migrants from Poland attending a school in Glasgow, and who reported integrative motivation as a significant predictor of the use of word-medial glottal replacement, which functioned as a marker of a stronger sense of Glaswegian identity.

Another variable frequently investigated in SLA studies which is also included in Gardner's model (2010) as well as Drummond's research (2010, 2010b, 2011, 2012, 2013) is language use anxiety. Several SLA studies (Dewaele, 2002; Gardner & MacIntyre, 1993; Oxford, 1999) demonstrate that when anxiety is conceptualised as specifically linked to L2, it has a negative effect on L2 speakers' performance, also for Polish users of L2 English (Baran-Łucarz, 2014). As Gardner & MacIntyre (1993) explain, speakers who report higher levels of anxiety will usually display lower levels of verbal production; they are also less willing to engage in interaction (Baran-Łucarz, 2014). Similarly, Gardner (2010) points out that language use anxiety often stems from L2 users' concerns about being misunderstood. While there have been a few exceptions (Stølen, 1987), anxiety has also been reported to negatively affect L2 pronunciation (Major, 2001), also in terms of accuracy (Feigenbaum, 2007). Therefore, it is expected that participants who will have reported higher anxiety levels will produce lower ratios of native-like /r/ variants.

2.3.4 Summary and Related Research Questions

This study presents a snapshot of the participants L2 performance and investigates internal and social constraints on non-prevocalic /r/-variability and explores indexical meanings attached to that variable. As such, it does not investigate the second language acquisition process per se. However, as stated before, acquisition is a prerequisite to controlled variation, which is why key SLA variables have been included. The research question that emerges is as follows:

Which acquisitional variables have an impact on variability in /r/ realisations?

2.4 Indexicality, Rhoticity and Rhotics.

2.4.1 Denotative, Pragmatic and Social Meaning

In semantics, the term “denotative” or “referential” meaning involves “the relationship between a linguistic unit (especially a lexical item) and the non-linguistic entities to which it refers” (Crystal, 2003, p. 129). However, it is clear that the way in which humans use language is more intricate, and the meaning of an utterance may change significantly depending on the context in which it is produced. To account for this, the notion of “pragmatic” meaning has been introduced. Pragmatic meaning can be defined as an additional “layer of calculations about the context” that the speaker and the hearer add “on top of” the referential meaning (Johnstone, 2010, p. 30).

Nevertheless, human speech alone conveys a multitude of “clues” on the speaker. These are used to infer biological, psychological and social information. While some of them may simply be the result of the constraints of physics or the speaker’s physiological characteristics, such as e.g. their vocal tract size, the size of articulators, etc., some, such as the speaker’s accent (i.e. segmental features, connected speech features and prosody), are largely a social product (Foulkes et al., 2010). The very choice of linguistic form itself can be meaningful: speakers, consciously or subconsciously, modify their speech characteristics to indicate their social identity (class, age, gender, ethnic affiliation), their stance, or the persona they want to project. It is precisely this kind of “social” meaning that is in the remit of sociolinguists as well as one of the foci of this study.

2.4.2 Indexicality

One concept that has frequently been used in the discussion of how linguistic forms can “evoke and/or construct . . . ‘social meaning’” (Johnstone et al., 2006, p. 81) is “indexicality”. In semiotics, an “index” is a type of sign which is “inherently or directly connected to its referent” (Kiesling, 2011, p. 105) unlike a symbol, which is arbitrary. Speakers often link linguistic forms, be it grammatical or phonological, with other, non-linguistic characteristics or features, e.g. the pronunciation of the word “path” as /pɑ:θ/ indexes southern Englishness, and for some might be associated with elite education in a public school (Joseph, 2010).

Within the field of sociolinguistics, the notion of indexicality goes back to the seminal work of Labov (1972), who proposed three types of indices: indicators, markers and stereotypes. While according to Labov (1972) indicators show social, but no stylistic stratification, i.e.

link particular set of phonological features to a geographical region, but are not yet linked to the ideology of “correctness”, markers indicate both group membership and are prone to shift across styles. Finally, stereotypes are defined as “socially marked forms, prominently labelled by society” (Labov, 1972, pp. 314-315). They can be stigmatised, i.e. evoke strong negative attitudes, but may also “enjoy varying prestige”(Labov, 1972, p. 314). It is this bias, this strong attitudinal response which they trigger that distinguishes them from markers; members of the speech community are highly conscious of stereotypes, discuss them, and may even refer to them using labels and phrases, such as e.g. “Brooklynese”, with its characteristic pronunciation of thirty-third as “toity-toid”, or “Southern drawl, i.e. a set of varieties of American English spoken across a number of southern states, represented by the phrase “Y’all” (Labov, 1972, pp. 314-315).

In his discussion of linguistic change, Labov (1972) explains how the status of linguistic features can change from an indicator to a marker, and subsequently, from a marker to a stereotype. If used by a marginalised group, the feature is stigmatised, and as such avoided, which ultimately leads to its extinction; alternatively, if it has become associated with prestige, it enters the dominant variety replacing the standard form (Labov, 1972).

Labov’s trichotomous model was subsequently organised “into a more general theoretical construct” of indexical order (Kiesling, 2011, p. 106) by the linguistic anthropologist Michael Silverstein (2003). Silverstein's (2003) model makes use of terms such as “first” or “n-th order indexicality”, “second” or “n + 1-st indexicality”; however, according to Silverstein (2003), “competing n +1-st order presuppositions yield different n-th-order entailments” (p. 203) or, in other words, after they’ve become ideologically transparent, second-order indices function as new n-th-order indices (p. 220) as they have been assigned new meanings, effectively becoming what Johnstone (2010) refers to as“(n+1)+1-th” order indices, or Labovian (1972) stereotypes. Thus, as Joseph (2010) observes, Silverstein’s (2003) indexical order comprises “an unlimited number of layers” (p. 17).

This process of linguistic forms becoming linked to social meaning is called enregisterment (Agha, 2007). According to Kiesling (2011), an index is enregistered when the correlation between the index and group membership and stylistic stratification becomes more meaningful in the community; in other words, when it becomes “more fixed into the metapragmatic function”(p. 106), i.e. the ideologically-laden engagement of speech community members in the use of language to discuss language use. Examples of

metapragmatic practices may involve e.g. the circulation of folk dictionaries, caricatures of local types speaking the local dialect appearing in the press and other media, interviews with linguists concerning the dialect in question, or even English language classes and job interview seminars, in which people may learn about other people's perception of their accent (Johnstone & Kiesling, 2008). However, as Johnstone et al. (2006) point out, not all metapragmatic practices necessarily involve explicit "talk about talk"; for example, a variety used by media, for example, newsreaders on a prestigious national radio station may come to be recognised as such by its listeners "without having this explicitly called to attention" (p. 80).

While Silverstein's concepts seem similar to their respective Labovian counterparts, according to Kiesling (2011), Silverstein is not interested in "what is purported to be "in the heads of speakers" (p. 106), i.e. the degree of consciousness these forms have, but categorises indices according to their relationship with the metapragmatic function. Moreover, Labov's (1972) model served his sociolinguistic purpose of explaining the history of particular sound changes; therefore, his indices follow an ordered trajectory of development. Silverstein (2003), on the other hand, is interested in the more abstract processes through which linguistic forms gain social meaning; his orders of indexicality do not change diachronically, but "n +1-st order indexicality is . . . always already immanent as a competing structure of values potentially indexed in - and - by communicative form of the n-th order, depending on the degree of intensity of ideologization" (Silverstein, 2003, p. 194). Therefore, for Silverstein (2003), n-th and n+1st order indices dialectically compete with one another.

Another approach to the multi-layered indexical meanings, where different-order indexicals co-exist next to each other was presented by Eckert (2008). Largely inspired by Silverstein's (2003) ideas, Eckert argued that the relationship between a linguistic variable and its social meaning is not fixed, but instead constitutes a whole gamut of potential meanings, or, what she calls, "an indexical field": a "constellation" meanings which are ideologically related, where any of these meanings can be recalled through the use of the variable linked to it Eckert (2008).

Silverstein's model (2003) has also been challenged by e.g. Joseph (2010, p. 17) as lacking the crucial explanation of where the indexical order exists, how speakers come to be aware of it, and how it manifests itself. These issues have been addressed e.g. by Johnstone and Kiesling (2008). Johnstone's work (Johnstone, 2010; Johnstone et al., 2006; Johnstone &

Kiesling, 2008) drew on both the Labovian (1972) constructs and Silverstein's model (2003) to investigate the enregisterment of a set of linguistic features used in the American city of Pittsburgh as the "Pittsburghese" dialect. Focusing on the monophthongal realisation of the diphthong [aʊ], the study described how first order indices of geographical region of origin (Labov's indicators) acquired the status of second order indexicals (markers) of place, correctness and social class, to finally become "filtered" through a set of beliefs on dialect and identity and become available for third order indexing (stereotypes) (Johnstone et al., 2006), i.e. to project the persona of the "authentic Pittsburgher".

An important point made by Johnstone et al. (2006) is that although speech community members may respond to social meanings and even use linguistic forms to generate those, they may not have a conscious awareness of the links between the two. Awareness of this connection was further investigated by Johnstone and Kiesling (2008): in their study, 36 citizens of Pittsburgh were played two versions of the same sentence which differed only in how a single phoneme a single word was realised (diphthongal [aʊ] vs monophthongal [a:]) and then asked a number of questions eliciting information on the indexical meaning associated with these realisations. The data were then compared with the participants' speech samples collected in sociolinguistic interviews in terms of how the variable in question was realised by the same people. The results revealed four different types of ideological schematisation represented by people of different ages and social backgrounds. To some older speakers living in dense multiplex social networks, the phonetic variable in question either bore no higher-order indexical meaning (first order indexicality) or was linked to standard language ideology (second-order indexicality) but not localness. For younger speakers who grew up in a more diverse sociolinguistic environment, the variable functioned both as a second-order index of "incorrectness" and as a third level indexical of an "authentic local identity" or, since this was not necessarily the kind of identity they themselves aspired to, of possessing "insider knowledge about the city" and "post-industrial urban hipness" (Johnstone & Kiesling, 2008, p. 29). Finally, for the representative of the middle-aged group, due to their being based on the participant's personal history, second order indexical meanings were idiosyncratic, unstable and variable. Moreover, the speakers for whom monophthongal [aʊ] indexed local identity were not likely to use it in their natural speech, while a large part of those participants who did monophthongise the variable themselves could not distinguish it from the standard, diphthongal realisation. Johnstone and Kiesling (2008) interpret those findings as evidence for the fact that indexical meanings vary within

the speech community, and that while it may be possible to identify repeated semiotic relationships between linguistic forms and social meanings, their interpretation by individual members of the community is not necessarily determined by the macro scale metapragmatic practices. In their opinion, it is “people’s lived experiences that create indexicality. ... There need be no correlation in the speech community at large between being a Polish Pittsburgher and monophthongizing, nor need the indexical meaning be discussed or shared with others” (Johnstone & Kiesling, 2008, p. 29). In other words, metapragmatic discourse is not essential for higher-order indexical meanings to arise; however, what it does is stabilise the existing indexical meanings for other members throughout the speech community. Therefore, Johnstone and Kiesling (2008) call for a bottom-up approach to indexicality to supplement the more popular top-down approach to sociolinguistic variation.

In the light of Johnstone and Kiesling’s (2008) recommendation, relying solely on statistical analysis in an attempt to arrive at a comprehensive, meaningful explanation for Polish migrants’ choices of non-prevocalic /r/ variants would have seemed futile. This is why the current study also relies on qualitative data regarding the speakers’ beliefs about their own community and their own speech patterns, which provide both contextualisation for the results of the quantitative analysis and allow the researcher to dig deeper in search of social, indexical meanings behind the /r/ variable.

2.4.3 /r/ as a Sociolinguistic Variable

2.4.3.1 /r/ as a Social Marker in the L1 Context

Dowd et al. (1990) observe that some speech sounds are more likely to perform indexical work than others; one of the variables that numerous studies have reported as salient and, as such, prone to socially-conditioned variation is the one that is the focal point of the current study: the sound /r/.

The English /r/ has a long tradition as a sociophonetic variable which has been investigated in the context of a number of accents. One of the most well known early variationist studies was Labov’s “department store” study in New York (1972). By collecting speech data from supermarket employees in Manhattan, Labov (1972) investigated the “presence or absence” (p. 44) of constrictive non-prevocalic /r/ realisations and demonstrated that this distinction served as a marker of social prestige. He concluded that the variable, i.e. the choice between rhotic versus non-rhotic realisations, “appeared to be extraordinarily sensitive to any measure of social or stylistic stratification” (p. 44). Labov’s (1972) work became a seminal piece of

research, inspiring numerous researchers. More recently, the use of postvocalic /r/ as an indexical of social status in New York was revisited in a series of publications by Eberhardt (2018) and Eberhardt and Downs (2013, 2015).

Another “classic” study on post-vocalic /r/ was conducted by Romaine (1978) in Scotland. She discovered a pattern of gender preference, with males choosing the tap realisation more frequently than females, who favoured the approximant variant. Social constraints on Scottish English /r/ realisation were later investigated by e.g. Scobbie, & Stuart-Smith (2011), who also provided evidence for a “socially-stratified continuum”(p. 265) of /r/ realisations, with working class males producing mostly tip-up/front-up allophones, and middle class girls using bunched tongue variants, which give the strongest impression of rhoticity. Numerous studies have since focused on the social stratification of the Scottish rhotic (Lawson et al., 2015; Lawson et al., 2013; Scobbie et al., 2015; Stuart-Smith et al., 2014). Their findings show that not only are the subtle articulatory differences between the allophones perceptible (see section 2.2.3.3.4), but they also serve as a marker of social identity.

2.4.3.2 /r/ as a Social Marker in the Bilingual Context

The role of /r/ as an indexical is not limited to L1 speech. Although, according to Zuengler (1991), in the context of L2, variability is often developmental rather than “sociolinguistic” in nature, she also acknowledges the fact that the communication between non-native speakers and native speakers does not take place in a social vacuum, but rather the two groups “communicate within a social context that they both influence and are influenced by” (p. 223). Indeed, there is numerous evidence than /r/ is prone to socially-condition variability even in the context of L2 performance.

In the context of American English, Zuengler (1988) investigated whether approximant /r/ realisation characteristic of GA had the status of a stereotype (Labov, 1972) in the consciousness of Spanish speakers of L2 English. 45 participants with a range of LoR values were presented with a set of sentences in Spanish which had previously been modified to include certain phonetic contexts and requested to read them out first in their “normal” accent, and then mimicking the American accent. Results revealed that the American /r/ was not only mimicked the subjects, but the sound was also the most frequently reported by a subset of participants as the one they had been conscious of altering (Zuengler, 1988), demonstrating metalinguistic awareness of the variable, which shows that for those L2 English speakers, the American /r/ was linked to higher-order indexical meanings.

A more recent study by Lybeck (2002) investigated the relationship between L2 Norwegian pronunciation and the degree of acculturation of nine American migrants living in Oslo. Pronunciation samples were analysed and rated in terms of the quality of /r/ realisations (American approximant vs. Norwegian tap or trill realisations). According to Lybeck (2002), although the use of American /r/ does not pose intelligibility problems for Norwegians, it “immediately identifies the speaker as American” (p. 178), which again suggests that the sound may have the status of a stereotype (Labov, 1972). The results also show that the participants who were the most successful in the acculturation process, i.e. their social networks included more satisfying relationships with native speakers of Norwegian, received the highest scores in terms of their use of native -like pronunciation.

In the context of Australian English Kiesling (2005) investigated the pronunciation of word-final <-er>, where a non-rhotic, backed and lengthened schwa-like variant was linked to speakers with a Greek, Italian or Lebanese background, and functioned as an indexical of “being Greek” as well as “a stance of connection and solidarity” (p. 30).

In the UK context, studies such as (Hall, 2017) and Hirson and Sohail (2007) investigated social variation in /r/ realisations in Punjabi-English bilinguals. Hirson and Sohail (2007) focused on the link between variation in /r/ realisations and self-identification in second-generation Punjabi speakers living in the south-east of England. Their results show that those speakers who identified as “British-Asian” produced almost exclusively non-rhotic variants, while those who identified as “Asian” produced predominantly rhotic speech, realising the rhotic as a post-alveolar [ɹ] or a retroflex approximant [ɻ], but also employing variants normally associated with Punjabi, such as retroflex taps [ɽ], which was used by all except one “Asian-identified” participants, as well as alveolar trills [r] (one participant) (Hirson & Sohail, 2007). Similarly, Hall’s (2017) investigation of /r/ variants used by bilingual adolescent speakers of Punjabi and English reveals that their choice of either British or Punjabi-like variants (the retroflex approximant [ɹ], the retroflex fricative [ʒ] and the retroflex flap [ɽ]) was related to their identification as either “British Asians” or “Asians alienated from British culture” respectively (p. 146).

Despite the scarcity of studies on the phenomenon, there is some tentative evidence of /r/ being linked to higher-order indexical meanings in Polish-accented English. Waniek-Klimczak and Matysiak (2016) suggest that Polish migrants in the UK use rhoticity to index “otherness” or an international status of the speaker. In addition, there is evidence that /r/

variants in Polish-accented English are subject to “metapragmatic practices” which involve caricatures of specific variety users speaking in the accent while appearing in the media (Johnstone & Kiesling, 2008). Examples of such practices are discussed by Szpyra-Kozłowska (2018), who, while investigating “fake” Polish accents in the film *The Zookeeper’s Wife*, suggests that trilled /r/ realisations by the actors playing Polish characters have an indexical function.

2.4.4 Related Research Questions:

Research questions that have emerged from this part of the literature review are as follows:

Is there any evidence of stylistic stratification, i.e. style shifts, in the use of /r/ realisations in Polish-accented English of Polish migrants living in the south of England?

What is the direction of those style shifts?

Are there any social constraints on variability in /r/ realisations?

Is there any evidence of higher-order indexical function linked to rhoticity or /r/ realisations in Polish-accented English of Polish migrants living in the south of England?

What are the indexical meanings linked to the non-prevocalic /r/ in Polish-accented English of Polish migrants living in the south of England?

2.5 Chapter Summary and Research Questions

This chapter has reviewed literature on the phenomenon of rhoticity as well as the articulatory and acoustic characteristics of the various members of the class of rhotics characteristic of English, Polish, and Polish accented English. It has also outlined internal, i.e. linguistic, SLA-related, as well as social constraints on variability in rhoticity as well as non-prevocalic /r/ realisations. Finally, key studies investigating indexical meanings linked to /r/ both in the L1 as well as bilingual context were presented. The research questions that emerged are as follows:

RQ1: Is the L2 English of Polish migrants consistently rhotic, non-non rhotic, or variably rhotic?

RQ1a: What are the internal constraints on variability in the use of rhotic and non-rhotic variants?

RQ2: Do Polish migrants use intrusive /r/?

RQ2a: What are the internal constraints on variability in the use of intrusive /r/?

RQ3: Are Polish migrants living in the UK consistent in terms of their choice of non-prevocalic English /r/ realisations, or are they variable?

RQ3a: Are there any phonetic constraints on variability in /r/ realisations?

RQ3b: Which acquisitional variables have an impact on variability in /r/ realisations?

RQ3c: Are there any social constraints on variability in /r/ realisations?

RQ3d: What is the main non-prevocalic /r/ realisation in L2 English speech of Polish migrants living in the UK?

RQ4: Is there any evidence of stylistic stratification, i.e. style shifts, in the use of /r/ realisations in Polish-accented English of Polish migrants living in the south of England?

RQ4a: What is the direction of those style shifts?

RQ5: Is there any evidence of higher-order indexical function linked to rhoticity or /r/ realisations in Polish-accented English of Polish migrants living in the south of England?

RQ5a: What are the indexical meanings linked to the non-prevocalic /r/ in Polish-accented English of Polish migrants living in the south of England?

Chapter 3 Methodology

3.1 Design

The study draws inspiration from both the “first wave” variationist studies (Labov, 1972; Trudgill & Trudgill, 1974) as well as later variationist studies (Eckert, 2012; Johnstone, 2009, 2010; Johnstone et al., 2006; Johnstone & Kiesling, 2008) while focusing on L2 phonetic variation. Some of the methodology was based on the approach proposed by Drummond (2010, 2010b, 2011, 2012, 2013), while other aspects were influenced by Sharma (2011) and Sharma and Sankaran (2011). In the part of this research concerned with motivation and attitudes, the methodology was based on the well-established socio-educational model proposed by Gardner (2010) and adapted in light of Drummond’s amendments in order to meet the objectives of this project.

The study employed primarily quantitative methods (for statistical analyses of speech tokens and questionnaires items); however, qualitative data were also collected in interviews and used to contextualise the findings as well as explore indexical meanings behind the various /r/ realisations employed by the participants. This part was inspired by the research of Johnstone and her colleagues (2010; 2006; 2008).

Before the actual data collection, a small pilot study was conducted with three participants. The purpose of the pilot was to test data collection methods and analysis procedures and amend the research tools accordingly. Where relevant, these changes are discussed below in the context of the respective research tools they affected.

3.2 The Population

The population studied was that of L1 Polish speakers of English who arrived in England as adults (at or after the age of 19) and who, at the time of data collection, had been living in the south of England for at least one year. The study focused on people aged 20-40, 19 typically being the age at which students attending academic schools (as opposed to vocational schools) complete their secondary education in Poland.

3.3 Sampling Methods

Participants were recruited through a combination of non-probability sampling techniques, e.g. convenience sampling, snowballing and purposeful sampling (Dörnyei & Csizér, 2012).

The main sampling method employed was convenience sampling; the researcher made use of those members of the target population who were willing to participate in the research without any financial compensation and who mostly lived or worked on or in the proximity of one of the University of Reading's campuses. Hence, more than 33% of the sample comprised participants who at the time of data collection were working or studying on a University of Reading (UoR) campus. The study also included participants living within a relatively short distance from Reading who belonged to the researcher's social networks and were thus willing to participate in the study. Those participants comprised almost 25% of the sample.

Snowballing was also employed, as some participants provided the researcher with further contacts or even helped recruit participants from among their friends or colleagues. Had it not been for this recommendation, those participants would not have been available to the researcher.

Although initially data were collected mainly through convenience sampling, during the process of data collection it became apparent that in order to avoid recruiting participants with similar profiles, purposeful sampling would also need to be employed to some extent. For example, most participants working on UoR campus tended to have a similar level of English, as good command of English was essential to work in many jobs on an international university campus. Therefore, as data collection was progressing, some participants were approached due to their specific level of proficiency in English, while others were recruited based on other specific characteristics they possessed, i.e. their level of education, gender or profession. Since the sample size was relatively small ($P=26$), this type of "Maximum Variation Sampling" or "Heterogeneous Sampling" (Etikan et al., 2016) allowed the researcher to recruit participants across a broader social and linguistic spectrum.

3.4 The Sample

Data were collected from 26 participants. This number of participants was the result of a compromise between collecting enough data to allow for making comparisons between the different groups of participants in order to identify potential trends and support the findings with statistical results, while still allowing the researcher to maintain a personalised relationship with individual participants, which seemed desirable in the qualitative data collection process. Data collection from individual participants was relatively time consuming not only due to the number of instruments used, but also due to the friendly,

“chatty” character of each data collection session, which extended the already significant amount of time necessary for task completion. However, it was felt that establishing a good relationship with each participant was necessary to facilitate the process and to make sure that the participants would not drop out during the session, leading to the loss of valuable data.

3.4.1 Age

Four participants were between the ages of 22-30, while the remaining 22 were aged 31-40.

3.4.2 Gender

T. Piske et al. (2001) point out that research on L2 acquisition yields divergent findings on the effect of gender on L2 pronunciation. Indeed, while Ryan’s (2018) research on the acquisition of sociolinguistic variation by Polish teenagers in Glasgow does not identify gender as a significant predictor, Drummond (2010) notes the existence of a gender effect on t-glottaling in L2 English of Polish immigrants in Manchester, and suggests that it could be attributed to the fact that, in general, women accommodate their speech more than men (Woods, 1997, as cited in Drummond, 2010). Moreover, gender effects have often been reported in numerous sociophonetic studies on the variation in /r/ realisations and rhoticity across different varieties of English (Dickson & Hall-Lew, 2017; Hall, 2017; Hirson & Sohail, 2007; Lawson et al., 2011; Meer et al., 2021; Stuart-Smith et al., 2014). Therefore, to account for potential gender differences, data were collected from both male and female participants.

It was the researcher’s intention to collect data from an equal number of men and women. Nonetheless, this proved challenging, as on the whole, it seemed that Polish migrant women were more inclined to take part in the study and share their experiences of migration. On the other hand, several Polish men declined the researcher’s invitation, typically providing a their busy schedules as their reason; however, it was strongly felt that one of the true underlying reasons was the fear of having their English language skills scrutinised and their linguistic “shortcomings” exposed. Eventually, 14 female and 12 male participants were recruited.

3.4.3 Education

25 participants completed their compulsory secondary education in Poland, and one participant attended a school in Serbia. Two participants had vocational qualifications only (left school at the age of 17), while five obtained A-levels-equivalent qualifications (“Matura” in Polish) only. Three participants were in the process of studying for a Bachelor’s

degree at a UK institution, while 16 were university graduates holding a Bachelor's (N=5), Master's (N=9), or a PhD (N=2) degree from Polish or English institutions of higher education.

3.4.4 Socio-Economic Status

Sociolinguistic studies adopting the variationist perspective have traditionally relied on the concept of class. However, as Drummond (2010) points out, the concept of class is difficult to operationalise in the context of immigration, since the migrants' socio-economic position in the new country may drastically differ from the one in their country of origin. Moreover, many migrants experience "status drop" in their host country (Sharma & Sankaran, 2011). Therefore, in this study the concept of class was abandoned in favour of a less problematic concept of employment. It is still important to point out that, particularly with migrants, it often is the case that the work they perform does not match the level of qualifications they have, and many work in jobs for which they are highly overqualified (Leschke & Weiss, 2020). Nevertheless, "recent employment history" was considered a more relevant construct to reflect the socio-economic status of an immigrant.

Moreover, since particular employment sectors tend to have higher shares of migrant labour (Leschke & Weiss, 2020) or, due to the routine nature of employment, require only basic English language skills, it was felt that the participants' employment situation played an important role in shaping the social networks they formed, their L1/L2 language use, and the variety of L1 they were exposed to on a daily basis. As Flege and Liu (2001) demonstrated in their study of Chinese students/non-students with different lengths of residence in the USA, the amount and quality of L2 input was a more accurate predictor of successful L2 acquisition than LoR. For these reasons, as far as possible, an attempt was made for the sample to include participants working in different positions. It was hypothesised that participants working in more skilled jobs would be exposed to more (potentially non-rhotic) NS input, which would contribute to a higher ratio of productions of the non-rhotic pattern of /r/ distribution and more native-like /r/ realisations.

Although a significant part of the participants in this study were employed by the University of Reading, those participants performed different types of work in different sectors and at different grades. On the whole, the participants' occupations ranged from unskilled or semi-skilled jobs (e.g. in cleaning, catering, as warehouse staff, security officers, lorry driving),

through administrative positions, to skilled work in education, healthcare, IT or even relatively high-level management positions; the sample also included university students.

3.4.5 Other Factors

None of the participants included in the study reported any speech disorders or hearing impairment; indeed, functional articulation disorder in /r/ production in Polish was the reason why several candidates were rejected from the study despite meeting all the other criteria. However, during one of the interviews a participant reported to have had problems with /r/ articulation in his childhood, while another appeared to have a slight lateral lisp. Nevertheless, data from both have been included in the final analysis, since, in the researcher's judgement, the former issue had been resolved, while the latter did not seem to affect the production of the linguistic variable of interest (non-prevocalic /r/).

3.5 Materials and Procedures

Data were collected during individual meetings with participants; the time of each session varied between 70 and 120 minutes depending on how quickly the participants dealt with the tasks and how much information they were willing to share. On average, a session lasted 90 minutes and comprised a series of tasks and activities. Every session was recorded using a Zoom stereo audio recorder placed unobtrusively on the table.

Since obtaining good quality speech recordings was essential for this study, initially the meetings with participants were conducted in an acoustically-treated room on the University of Reading campus. However, after only two sessions it became apparent that interviewing people in this particular location presented a number of difficulties. Firstly, the purpose of the sociolinguistic interview was to collect as natural speech data as possible within that format; however, the participants interviewed in the small studio were visibly intimidated by the surroundings, i.e. acoustically-treated walls, large microphones and a glass panel in the front wall. They were aware of being in a public space and felt like "during a live radio interview", as one of the participants noted. The lack of a more relaxed, intimate atmosphere clearly affected their participation, as it was felt that they kept their answers to the bare minimum and seemed quite uncomfortable sharing more personal information. Moreover, they seemed extremely self-conscious when speaking in English or completing the speech elicitation tasks. Secondly, the acoustically-treated space was only available within limited hours, in high demand, and had to be booked in advance. Since participation in this study was purely voluntary, it was felt that it was the researcher who should be flexible and work around the

participants' schedules, which were often extremely busy, especially during the working hours; however, maintaining access to the studio would have practically eliminated any room for flexibility, which could have eliminated a significant number participants from the study. Therefore, a decision was made to arrange for the meetings to take part in other locations.

Most data collection took place in the researcher's supervisor's office on campus. Since a significant part of the participants comprised of UoR employees, the campus was a familiar and easily accessible location. As most of the meetings took place in the evenings, outside working hours, the campus also seemed a safe public space. Although meeting in an acoustically untreated office could potentially compromise the quality of speech recordings, it was hoped that the more intimate atmosphere would result in much more natural speech data and more comprehensive answers. An attempt was made to create a friendly, relatively informal atmosphere by a short "chat" in Polish at the beginning of every session, offering each participant a hot beverage and snacks.

For those participants who were unable or not willing to meet on campus, particularly those living outside Reading, meetings took place in the participants' homes. Because of this, it was not always possible to eliminate background noise, which in a couple of cases significantly affected the quality of recordings, making the analysis of spectrograms of certain tokens difficult. However, this compromise enabled the researcher to collect richer qualitative data and ample speech data from a larger number of participants.

Each participant was informed that the researcher would be collecting data on their experience of migration as well as their language use. The core variable of interest (postvocalic /r/ realisations and their potential indexical value) was not revealed to the participants until after each session was finished. It was hoped that such approach would prevent the participants from identifying the variable of interest and thus prevent potential bias. Indeed, when asked after the session if they had been aware of what exactly the researcher was investigating, most participants reported that they felt the main focus of the study had "something to do with spoken English" or "English vocabulary", and perhaps up to 50% identified the core variable of interest as their "English pronunciation"; only a few identified the variable as "their pronunciation of /r/", but admitted they were only able to do so having read out the complete word list, which means that all the preceding tasks should have been free from bias at least in this aspect.

Participants were asked to take part in a semi-structured interview, complete a questionnaire, provide a comprehensive answer to a question meant to elicit free speech data, read out a reading passage, read out a wordlist and provide information regarding their social networks and language use. The structure of a typical session was as follows (see Table 1):

Table 1

The Structure of Data Collection Sessions

Task	Time	Language	
1. Meet and greet/warm-up	5-10 min.	Polish	
2. Semi-structured interview	15-20 min.	Polish	Socio-attitudinal data
3. Questionnaire	15-20 min.	Polish	
4. Free speech elicitation task	5-15 min.	English	
5. Reading passage	10 min.	English	Speech data (Sociolinguistic interview)
6. Word list task	5-10 min.	English	
7. Social networks and language use interview	20-45 min.	Polish/English	Social networks and language use
8. Wrap-up	5-10 min.	Polish	

A relatively wide range of tasks was employed in order to elicit speech data which would enable observing potential shifts in style (RQ4 and 4a), since according to Labov (1972), the more attention is paid to speech, the more “formal” style is produced. Tasks which collected linguistic data were arranged in the order from the least restricted to the most restricted ones, i.e. starting with the question meant to elicit free speech, which was followed by the participants reading out the text passage provided and ending with the word list task. This sequence was employed in order to minimise the chances of participants identifying the variables of interest, i.e. the different realisations of postvocalic /r/.

Speech elicitation tasks were preceded by tasks eliciting socio-attitudinal data and qualitative data. This was mainly due to the fact that, at least in the researcher’s experience, reading a text passage or a word list out loud can be perceived as stressful or tedious; moreover, it was expected that some participants would feel a certain level of anxiety when speaking in L2 (Gardner, 2010). Therefore, focusing on tasks which did not necessarily involve communication in English before moving on to potentially more stressful tasks allowed the

participants to get used to the presence of researcher and the fact that their responses were being recorded.

In the small pilot study, the initial task to start each session was the questionnaire; it had been hoped that such a relatively easy task would give the participants some time to get used to the researcher's presence before proceeding with more complex tasks. However, during the pilot it was observed that some of the issues explored by the questionnaire were later on referred to or discussed further by the participants during the semi-structured interview. For this reason, the decision was made to start each session with the semi-structured interview instead in the attempt to avoid affecting the participants' responses and thus avoiding potential question-order bias (Lewis-Beck et al., 2003).

Each session ended with the participants discussing their social networks and language use. It was felt that this stage was less formal and not as cognitively demanding as e.g. the speech elicitation tasks, and thus was an appropriate way to finish a relatively long and potentially exhausting session. Moreover, sharing information about their daily interactions required a certain level of trust between the participant and the researcher, which, it is hoped, would have already been established at this late point in the session. Since the task did not impose what language the participants were to communicate in with the researcher, most participants either switched to Polish or kept code-switching between Polish and English throughout the task, which further contributed to a fairly relaxed atmosphere, hopefully resulting in more comprehensive and genuine responses.

Individual procedures for eliciting data are discussed in more detail in the following sections.

3.5.1 Semi-structured Interview

The main purpose of the interview was to obtain qualitative data to contextualise and support the findings of the study, in particular to explore the indexical meanings attached to the non-prevocalic /r/ variants and the participants' awareness of the links between that linguistic variable and its social meanings (RQs 5 and 5a). The format of a semi-structured interview was chosen over that of a structured interview. This was because it was felt that the former would seem a more natural form of interaction to the participants, thus creating a more relaxed atmosphere of a friendly "informal chat" rather than a "serious interview". In addition, this format allowed the researcher to ask follow-up questions to ask for more details and to clarify any confusion when it arose (Szombatová, 2016).

The interview was conducted in Polish so that the participants answers would not be restricted by their English language proficiency level. It was also felt that using the L1 shared both the researcher and the participants allowed for more natural communication and building rapport, which was especially important at this initial stage of the session, when many participants felt some anxiety over being interviewed by a stranger.

While the rationale for choosing Polish has already been explained, this decision raises an important issue, which is the potential impact of the use of Polish on the participants' performance on speech elicitation tasks. Since both the participants and the researcher/interviewer were Polish, using their shared L1 could have resulted in the participants orienting to the interviewer as Polish, thus employing more Polish-like phonetic variants during L2 speech elicitation tasks.

This concern seems partially justified in light of the work of Llamas et al. (2009), who investigated the extent of speakers' linguistic accommodation to in-groups and out-groups in a town close to the border between Scotland and England. In the study, speech data were elicited by three interviewers, each speaking English with a different accent: a Scottish one, an English one and a non-native, Austrian accent. Indeed, Llamas et al. (2009) found that in wordlist style, the rate of rhotic realisations was higher in interactions with the non-native (Austrian) interviewer than with the English one, and it increased even more in interactions with the Scottish interviewer. Yet, despite this increase, which, as the authors acknowledge, may be interpreted as tentative evidence of convergence towards the interviewer, the rate of rhotic variants remained very low throughout the cohort. In addition, no interviewer effect on coda /r/ realisations was observed for conversational speech data, which lead the authors to conclude that, at last for free speech data, "the inter-viewer effect does not . . . appear to pose a significant problem for the compilation of a data set in terms of the increased or decreased use of phonological variants associated with relevant in-groups and out-groups" (p. 402). While they do suggest that more research is necessary in the context of word list data, they also state that "overall, the evidence for accommodation appears inconsistent and not wholly compelling" (p. 401).

Following from the finding of Llamas et al. (2009), while it is possible that some convergence towards the perceived variety of the interviewer may have taken place in the word list data, this interviewer effect should not detract from the differences among the participants in terms of their choices of postvocalic /r/ variants, or the internal constraints this

study aims to identify. In addition, the impact of the interviewer's Polish identity might have been somewhat mitigated by his entirely non-rhotic L2 English accent employed for those parts of the session where English was used (see Table 1). Therefore, while it needs to be admitted that the participants may have interacted with a native speaker of English differently than with a fellow Pole, those differences do not undermine the overall findings of this study.

The small pilot study employed 11 questions; however, some questions were identified as potentially vulnerable to social desirability bias, and were thus eliminated. Therefore, the final version of the interview consisted of six questions only (see Appendix I).

The purpose of the first question ("What jobs have you had since you moved to the UK?") was to elicit information on the participants' recent employment history and their current job situation to help establish their socio-economic status. Even though the written questionnaire collected information regarding the participants current occupation, it was expected that some participants would have changed jobs more frequently than others even within a relatively short time period, which meant that information provided in the questionnaire may not have been sufficient to really understand each participant's career trajectory and professional background. Including this question in the semi-structured interview allowed to collect more in-depth information and also allowed to clarify any potential confusion regarding their official work titles, the nature of their work and their work environment.

Questions 2-5 (2. "When talking to a stranger, e.g. in a shop, can you tell if they are from Poland? How?", 3. "When talking to a stranger, e.g. in a shop, are *you* instantly recognised as Polish? Why?", 4. "What is your general opinion on the English of Polish people living in the UK?", 5. "How do other people feel about your English? What feedback/comments do you usually get (if any)?") focused on indexicality and were intended to indirectly elicit any beliefs the participant may have been holding regarding the various characteristics of Polish-accented English (RQs 5 and 5a). Questions 2 and 3 were deliberately vague in the sense that they did not specifically focus on accent, but allowed the participants to decide what stereotypes they wanted to focus on: those regarding physical appearance, culture, or indeed, language, thus helping avoid bias.

The final question (6. "Have there been any particular people or events in your life who/which might have influenced your English?") was intended to elicit further information on every participant's learning trajectory, their motivation and language learning influences in order to further contextualise the findings regarding every individual participants' English

pronunciation. The question was, again, deliberately vague, focusing on “the way you speak English” rather than “your English pronunciation”, which allowed for different interpretations in an attempt to prevent biased answers.

3.5.2 The Questionnaire

The questionnaire distributed to the participants was translated into Polish to ensure the questions were comprehended by the all participants regardless of their level of proficiency in English. It consisted of four sections: the purpose of the initial three sections was to collect socio-demographic data, information on the participants’ English-language learning trajectory and language use, as well as additional information inspired by Drummond (2010), while the final section was inspired by (Gardner, 2010) and comprised of 33 items meant to elicit information on attitudes and motivation, investigate the following constructs/classes of variables (RQs 3b and 3c):

- Motivation (Desire to sound more like a NS of GB, Attitude towards learning English, Motivational intensity);
- Integrativeness (Integrative orientation to improve pronunciation, Interest in foreign languages, Attitudes towards NSs of GB, Attitudes towards English culture);
- Instrumental orientation to improve pronunciation;
- Anxiety about speaking English;
- Attitude towards the GB accent;
- Attitude towards the GA accent.

The questionnaire made use of multi-item scales, with a number of items collecting information on the same variable. In order to ensure internal consistency reliability, Gardner (2010) recommends using five positively-keyed, and five negatively-keyed items for each scale (or alternatively, eight positively keyed items) while Drummond’s (2010) questionnaire employed six items per measure only. Nevertheless, considering the already substantial length of each individual data collection session, a decision was made to limit the number of items in the Questionnaire to three per construct: two positively-keyed ones and one negatively keyed one. This allowed to reduce the amount of time necessary to complete the Questionnaire and thus minimised the fatigue factor.

The approach taken was indirect, in that the learners were not requested to evaluate e.g. the strength of their motivation, but the information of interest was inferred from the participants' answers on their beliefs, aims and behaviour. This was in line with Garrett (2010), who notes that indirect measures involve using "more subtle, often deceptive techniques than simply asking straight questions about what people's attitudes are to something" (p. 41).

Each statement was provided with a six-point forced-choice scale, which meant that the participants were not presented with a neutral type of answer, such as "not applicable" or "not sure". According to Lewis-Beck et al. (2003), eliminating such "nonresponse" options increases the number of responses that can be used for further analysis. The six points on the scale were labelled "strongly disagree", "moderately disagree", "slightly disagree", "slightly agree", "moderately agree" and "strongly agree". Alongside the 33 statements, the questionnaire also contained seven foils, which were intended to distract the participants by asking them about e.g. their writing or reading skills in English, and thus to prevent them from identifying the main constructs investigated in the questionnaire. In a further attempt to make the purpose of the questionnaire less conspicuous, all questions were randomised using Microsoft Excel.

3.5.3 Social Networks and Language Use Interview

Numerous sociolinguistic studies investigating speakers belonging to a specific ethno-cultural group (e.g. Urdu or Chinese communities in the UK) have focused on the proportion of "ethnic" ties in the participants' individual networks (Cheshire et al., 2008; Stuart-Smith et al., 2011; Wei et al., 1992) as either a source of innovation in the process of language change or as an important factor determining language use. Similarly, in her study of phonetic variation in the speech of British-born members of the Punjabi community, Sharma (2011) employs a network measure; however, due to the fact that all the participants in her study had predominantly Asian ties, she decided to investigate network size and diversity instead, thus introducing a new network measure: "a Diversity Index". Since this study focuses on first generation migrants who are all bilingual, i.e. all have Polish as their L1 and all have varying levels of proficiency in English, it was assumed that the language in which participants conduct their interactions was more important than the number of different groups their contacts fall into, i.e. network diversity. For example, having just one group that is non-Polish and that a person regularly interacts with may be more significant than having several groups in several different domains, which, however, are all purely Polish-speaking. Therefore, a decision was made to abandon social network measures in favour of an index

reflecting participants' L1/L2 use. Nevertheless, in order to obtain reliable data on language use, the participants' social networks were investigated and the medium of interaction was determined for each contact.

The approach employed in this part of the session was inspired by the approach outlined in Sharma (2011). Participants were asked to name individuals that they regularly interact with, such as partners, family members, friends, colleagues, fellow members of clubs or organisations they belong to. A decision was made not to specify how many contacts each participant should name as part of their network so as not to influence their answers. Participants were informed that no real names were required and that reassured that the purpose of this interview was to find out what their social world and language use looked like. Each participant was asked to name their contacts and then provided information on their age, gender, nationality, the domains they would interact in (e.g. work, church, home), how long they have known this person for, the estimated amount of time spent interacting with that individual and the language(s) used in those interactions as well as contacts shared by the named individuals.

Typically, the researcher would provide the participant with a example of what kind of information was expected, and then together they would identified a number of domains the participant wanted to discuss. Then, with each domain the participant would name contacts, while the researcher took notes and asked questions to obtain the relevant information on each contact. As such information is quite personal, this part of the session was conducted mainly in Polish, but code-switching between L1 and L2 was relatively frequent, which was perhaps due to the relatively relaxed, reassuring atmosphere.

A question on how close each contact was to the participant was included initially; however, with time it became apparent that many participants found that question difficult to answer or found it too intrusive, so eventually a decision was made to abandon it.

3.5.4 Linguistic Data

Linguistic data was obtained through a sociolinguistic interview, which aimed to systematically eliciting variation in rhoticity across contextual styles (Labov, 1972) (RQs 1, 2, 3d, 4, 4a). A range of tasks eliciting the variable of interest was employed: a free speech elicitation task, reading out of a reading passage and a word list. Apart from eliciting the variable of interest, the free speech data obtained were also used to assess each participant's level of spoken English.

3.5.4.1 Free Speech Elicitation Task

Each participant was asked the question “What, in your experience, is the best and the worst thing about being a Polish migrant living in England?” and informed that they had five to ten minutes to share their experiences. The topic of the experience of migration was selected because it was deemed relevant to all the participants. Moreover, the phrasing allowed the participants decide how specific they wanted to be in their answers and what aspect of their experience they wanted to focus on.

Even though in this part of the session the researcher tried to refrain from speaking as much as possible, some participants were more willing to speak, while others required prompting, in which case the researcher provided some encouragement (“Tell me more about it”) or asked follow up questions. In one or two extreme cases, the format of the task resembled an unstructured interview, with the participant producing a few sentences and the researcher asking a follow up question. Even though the differences in the willingness to speak may have been linked to each participant’s personality, since everyone took part in the study voluntarily and had been provided with some general information about the study prior to the session, it seems reasonable to assume that everyone was prepared to share their experiences. Therefore, it seems that the need for heavy prompting was mainly linked to some participants’ lower-level of English language proficiency. Indeed, those participants’ speech was characterised by slow delivery with long pauses, most likely to search for words, and frequent repetitions. Thus, in order to obtain enough tokens for analysis, a significant amount of prompting as well as providing extra time were required, which was the main reason why the duration of the recordings varied from 4.5 minutes to even 15 minutes in one case.

3.5.4.2 The Word List Task

The main focus of this study was to investigate the variability in postvocalic /r/ realisations in syllable codas in the L2 English of Polish immigrants. While the tasks discussed above were aimed at investigating the potential external (social) reasons for the increase or decrease in the frequency rates of rhotic variants and specific /r/ realisations, as well eliciting natural speech data, the aim of the word list was to elicit data that would enable the researcher to identify potential internal constraints on variability, i.e. the aspects of the language itself which contribute to variability of the linguistic form in question (Coupland & Jaworski, 2009), such as phonological context (RQs 1a and 3a). The wordlist comprised 250 items, out of which 22 were foils and the rest were individual words containing a postvocalic /r/.

Even though the literature on L2 English of Polish migrants is rather scarce, with the exception of Waniek-Klimczak and Zajac (2017), the body of literature on rhotics in Polish, American English and Scottish English reviewed in the Literature Review chapter mentions a wide range of internal constraints on allophonic variability in /r/ realisations. However, many of those constraints are related to the position of /r/ in the syllable, i.e. intervocalic versus word-initial (e.g. Delattre and Freeman, 1968; Scobbie et al., 2015). Since the current study focuses on non-prevocalic /r/ only, the subset of constraints investigated in this study is relatively small.

Overall, the stimuli for the wordlist were selected to account for the following factors:

- lexical stress, i.e. stressed and unstressed syllables;
- syllable structure, i.e. open and closed syllables;
- the quality of the preceding vowel;
- the following consonant, i.e. place of articulation and the number of consonants in the coda following the /r/, i.e. one consonant or a two-consonant cluster;
- priming, i.e. the presence of a preceding pre-vocalic and postvocalic /r/.

To account for the various combinations of these factors, words containing a postvocalic /r/ were selected for every of the following categories: /r/ in stressed, open syllables; /r/ in unstressed, open syllables; /r/ in stressed, closed syllables and /r/ in unstressed, closed syllables. Within each category, the impact of various vowel and consonantal segments was also tested. To investigate /r/ priming effects, whenever feasible, the categories listed above were extended to include the potential impact of a preceding pre-vocalic and post-vocalic /r/.

Lexical frequency of items was also controlled for. According to Flege (2012), who investigated Japanese speakers' perception of English segments /l/ and /r/, speakers' perception of L2 segments can be significantly influenced by word familiarity. He also claims that input has plays a crucial role in affecting the native-likeness of L2 speakers' segmental production (Flege, 2012). However, since it would have been extremely difficult to objectively measure participants' exposure to and familiarity with every lexical item on the word list, a decision was made to include lexical frequency of every item as provided by the British National Corpus on the premise that the more frequent a given lexical item is, the more likely it is that the participants would have been exposed to it and therefore would be

more familiar with it. Since the study focuses on spoken English, the spoken restriction option was used for looking up the frequency of items.

The following sections contain a more detailed description of the word list compilation process and of the tokens used.

3.5.4.2.1 Stressed, Open Syllables ('V(r) and 'CV(r))

This category comprised one-syllable words with no onset and no coda (Vr), as well items with an onset (CVr). All permissible phonological contexts were identified; for each context, items were looked up using the sound search option in the digital version of the Longman Pronunciation Dictionary (Wells, 2008). Once each item's lexical frequency had been checked, the highest frequency items were retained.

When referring to vowels, this thesis frequently employs Wells' Standard Lexical Sets (1982), i.e. keywords representing a group of words with the same vowel sound. The vowels represented by the tokens included the monophthongs /ɜ:/ (NURSE), /ɑ:/ (START), and /ɔ:/ (NORTH/FORCE) as well as the diphthongs /eə/ (SQUARE) and /ɪə/ (NEAR). The CURE words (e.g. "pure", "poor", "sure") were discarded due to the increasingly popular phenomenon of cure lowering, i.e. pronouncing words from the CURE lexical set with the same vowel as in FORCE (Hannisdal, 2010). Although, according to her, the /oə/ diphthong is still preferred before prevocalic /r/ (e.g. "tourist"), the more common realisation for post-vocalic /r/ in GB is FORCE (Hannisdal, 2010). Therefore, CURE words were not included in the word list.

Although NEAR words were included, some of the high frequency words had to be discarded and replaced with lower frequency words due to widespread variation in how the vowel is realised; for example, "year" /jɪə/ was discarded due its alternative pronunciation as /jɜ:/ (Wells, 2008). Words with triphthongs were not included either, as in native speech these are likely affected by smoothing, resulting in a diphthongal pronunciation.

Due to the relatively low number of Vr words in English, only one token per context was selected. For CVr words, three items per context were selected to account for lexical effects, i.e. lexical information influencing phoneme choices. In order to obtain a wide range of stimuli, CVr items differed in terms of the place of articulation of the consonants in the onset, which fell into one of the following categories: bilabial and labio-dental (A); dental, alveolar, post-alveolar and palatal (B); velar and glottal (C); labial-velar (D).

Where it was not possible to find any high frequency CVr words, CCVr items were used; for example, “star” was used instead of the lower frequency “tar”. Lexical items which were less frequent than 1 occurrence per million words were discarded, with the exception of “blur”. Where possible, high frequency content words were prioritised over function words in order to ensure that citation forms rather than connected speech forms were elicited.

3.5.4.2.2 *Unstressed, Open Syllables (CV(r))*

Items in this category consisted of two-syllable CVr words stressed on the first syllable. However, it was not possible to find high frequency two-syllable words for every vowel included in the previous category. Therefore, a decision was made to only include lettER words, since most common vowel in unstressed syllable rhymes is /ə/.

Since lettER words are relatively common, the spoken corpora of the British national Corpus were used to generate frequency lists based on the spelling of the suffix, e.g. <-ter> to elicit /tə(r)/ and the highest frequency items were then selected. Again, in order to obtain more varied stimuli, items differed in terms of the place of articulation of the consonants in the syllable onset. To account for lexical effects, three items per context were selected. Words with /r/ (pre or post-vocalic) in the preceding syllable were included in a separate category.

3.5.4.2.3 *Stressed, Closed Syllables ('CV(r)C)*

The category comprised one s-syllable CVrC words. The vowels again included /ɜ:/ (NURSE), /ɑ:/ (START), /ɔ:/ (NORTH/FORCE), /eə/ (SQUARE) and /ɪə/ (NEAR). The consonants in the coda fell into one of the following categories: bilabial and labio-dental (A); dental, alveolar, post-alveolar and palatal (B); velar (C); labial-velar (D). The categories were based on the premise that since both Polish /r/ and most English realisations (post-alveolar approximant as well as retroflex approximant) involve tongue tip-gestures, environments with a following coronal consonant (B), i.e. one produced with the tip or the blade of the tongue, may be more conducive to a rhotic realisation than those not involving lingual articulations (A) or those involving the back of the tongue (C).

Where possible, words which presented potential challenge to Polish L1 speakers in terms of their pronunciation, e.g. due to their similarity to Polish lexical items which may have lead to transfer from Polish, or because of their complex spelling, were also discarded in favour of lower frequency, but less potentially problematic tokens. Those “challenging” items were identified based on the researcher’s considerable experience of teaching English pronunciation to Polish learners of English. For example, many Polish speakers of English

pronounce “worse” with a vowel that is closer to /ɔ:/ or /ɒ/ than /ɜ:/, which is why, in order to elicit /ɜ:(r)/, “worse” was discarded in favour of “nurse”.

3.5.4.2.4 Unstressed, Closed Syllables (CV(r)C)

Similarly to the “unstressed, open syllables” category, this category comprised two syllable words with the first syllable stressed. The same procedure for finding tokens was followed. However, since it was not possible to identify high frequency letter words for all the phonetic contexts, a decision was made to also include words with /ɜ:/ in addition to those with /ə/. This was due to the fact that in GB the two vowels are very close to each other in terms of quality (John Christopher Wells, 1982) or indeed identical (Lindsey, 2012a). Again, the consonants in the coda belonged to one of the categories discussed above.

3.5.4.2.5 Priming

In order to account for the potential effects of a preceding /r/, the category comprised words with the non-prevocalic /r/ preceded by a prevocalic /r/ in a number of contexts, which are discussed below. It is important to point out that the position of the word-internal pre-vocalic /r/ is a somewhat controversial issue in phonology; for example, in the Longman Pronunciation Dictionary it is analysed as a part of the coda of the previous syllable (Wells, 2008), while according to the Maximal Onset Principle (Selkirk, 2020), it belongs in the onset of the unstressed syllable. Although those theoretical considerations do not seem to bear any direct implications for this study, for the sake of consistency, this study will follow the Maximal Onset Principle. The following contexts containing a priming /r/ were included:

- open, stressed syllables, with the preceding prevocalic /r/ in the onset of the same syllable: ('rV(r)): only three lexical items with that structure were identified: “rare, rear, roar”;
- closed, stressed syllables, with the preceding prevocalic /r/ in the onset of the same syllable ('rV(r)C): only four lexical items with that structure were identified: “rears, reared, roars, roared”;
- open, unstressed syllables, with the preceding prevocalic /r/ in the onset of the same syllable ('VrV(r)). As in other items with non-prevocalic /r/ in unstressed syllables, all the stimuli contained the letter vowel; however, in order to obtain a wider range of items, all r-liaison vowels except for CURE were used in the initial syllable of two-syllable words, .e.g

“nearer”, “stirrer”, as well as another letter vowel in the penultimate syllable of multi-syllable word, e.g. “lecturer”;

- closed, unstressed syllables, with the preceding prevocalic /r/ in the onset of the same syllable (‘VrV(r)C). The words used were identical as in the preceding category, with the only difference of an added consonantal segment in the syllable onset. Since all the words in this category were nouns, the only way to obtain unstressed closed syllables with the V(r)C was adding the segment /s/, resulting in plural forms, for example “explorers” or “lecturers”;
- open, stressed syllables, with the preceding prevocalic /r/ in the onset of the preceding syllable onset (rV’CV(r)). Stimuli to represent all the /r/-liaison vowels were identified, with the exception of /ɑ:/, as no lexical items could be found with that vowel. Moreover, due to the limited number of words with this particular structure, only one item was found for /eə/ (“repair”), and only two items were found for /ɪə/ (“revere” and “rehear”) and /ɜ:/ (“refer”, “recur”). Three items represented /ɔ:/ (“rapport”, “rebores” and “restore”);
- closed, stressed syllables, with the preceding prevocalic /r/ in the onset of the preceding syllable (rV’CV(r)C). The category comprised items for all the r-liaison vowels. An attempt was made to provide a wider range of stimuli by including items with consonants in the onset of the second syllable representing the four categories (A, B, C, D) for different places of articulation discussed above. However, this was not always possible; as a result, often fewer than three items per context were employed.
- open, unstressed syllables, with the preceding prevocalic /r/ in the onset of the preceding syllable (‘rVCV(r)). All the items contained the vowels /ə/ or /ɜ:/ (see above). In order to provide a wider range of stimuli, the consonants in the onset of the second syllable represented the three categories (A, B, C, D) for different places of articulation. Three tokens per context were included;
- closed, unstressed syllables, with the preceding prevocalic /r/ in the onset of the preceding syllable (‘rVCVrC). All items contained either the vowel /ə/ or /ɜ:/; different consonants in the onset of the stressed syllable were

employed (A, B, C) to provide a wider range of stimuli. However, it was not possible to provide three items per category, resulting in six items on total: “reverb”, “ringworm”, “Robert”, “Richard”, “rivers” and “roadwork”.

The category also included items with a preceding postvocalic /r/. This was in order to test if a constrictive realisation of the preceding /r/, i.e. a rhotic production of the word, would be a predictor of a constrictive /r/ in the second syllable. In order to reduce length of the word list, only two contexts were used, which included open and closed, unstressed syllables; with the preceding prevocalic /r/ in the coda of the preceding syllable ('V(r)CV(r) and ('V(r)CV(r)C). All unstressed syllables contained the vowel /ə/ and the consonants in the onset belonged to the different PoA categories, e.g. “server”, “servers” (A) or “porker”, “forkers” (C).

Apart from all the categories described above, the list included three stimuli with word-internal /r/: “thawing”, “drawing” and “withdrawal”.

All the tokens were randomised using an Excel formula to produce five different versions of the word list, so that no more than five or six participants were presented with the same order of items. The reasons behind this were to minimise any potential priming/coarticulatory effects from other tokens as well as to account for the potential effects of participant fatigue, which typically occurs when participants' motivation and attention decrease in the later stages of a task (Lavrakas, 2008). Considering the significant length of the word list employed in this study, different versions were used to prevent participant fatigue from affecting the quality of the data.

The participants were instructed to read out the word list at a fairly natural speed, but making sure to produce a pause between every item on the list in order to avoid any coarticulation and connected speech effects between items.

3.5.4.3 Reading Passage

From the items compiled for word list one or two words were selected for every phonetic context and incorporated into a reading passage, which was a short story written by the researcher. The objective was to investigate for any stylistic shifts (Labov, 1972) between the word list and the reading passage. The participants were asked to read out the short story at a normal pace as if reading out to a child. However, the task turned to be challenging, with many participants struggling to read out loud, which resulted in numerous pauses, high rates

of repetitions and, crucially, high number of mispronounced words. This could perhaps be explained by the challenging nature of reading out and the additional pressure of doing that in L2. However, it could also be argued that the high frequency of errors and a clear reduction in fluency were caused by some participants' relatively low familiarity with vocabulary and syntactic structures present in the text. As a result, data obtained from the reading passage task were not included in the final analysis.

3.6 Preliminary Analysis and Coding

3.6.1 Linguistic Data

3.6.1.1 Free speech – Level of English

Free speech recordings were used to determine the participants' level of English. This standard employed was the International English Language Testing System (IELTS) framework, which consists of nine "bands" corresponding to the following proficiency levels: "non-user", "intermittent user", "extremely limited user", "limited user", "modest user", "competent user", "good user", "very good user" and "expert user". This particular assessment framework was selected for several reasons: not only is it commonly employed as means of testing English language proficiency for migration, work and study (IELTS), but it is also highly standardised, with widely available, clearly defined sets of assessment criteria. Moreover, it was hoped that with quality control procedures as well as regular training and monitoring of IELTS examiners (IELTS, 2019), employing examiners actively working within the system would result in higher consistency of scores between the two assessors.

High-quality mp3 files with the recordings of the English-language part of the interview were sent via email to two active IELTS examiners who had professional experience as teachers and examiners at the International Study and Language Institute at the University of Reading as well as the local IELTS examination centre. The recordings were assessed independently, and marks were awarded according to IELTS speaking descriptors in three categories: Fluency and Coherence, Lexical Resource, Grammatical Range and Accuracy.

The marks awarded in each category by the two assessors were compared for every participant; where they differed by more than one band, which was the case for three participants, a third IELTS examiner was consulted to act as a moderator (for that particular skill). Using those marks, an average overall grade was calculated for every participant.

Finally, an overall band score was calculated. The resulting grades were subsequently used for statistical analysis.

It is important to point out that the Pronunciation criterion, which is normally a constituent of IELTS grades, was not included in the overall grade, as one of the purposes of obtaining IELTS grades was to examine the relationship between the speakers' level of English and their pronunciation.

3.6.1.2 Free Speech Transcription

Before the transcription process, all free speech recordings, which had been recorded in the ".wav" format, were checked and edited in Audacity (2018) in order to facilitate the transcription process. A few of the longer recordings were trimmed down to the maximum of eight minutes. Apart from that, editing was kept to the minimum and was typically limited to removing the very final part of the recording, which was the interviewer thanking the participant, and which was not redundant for further analysis, or removing noises at the beginning or end of each recording. In some cases where it was necessary for the researcher to repeat follow-up questions, which was usually due to the participants' lower proficiency in English, those repetitions were removed from the recording in to reduce the size of the files and speed up transcription process.

All free speech recordings were transcribed orthographically using Microsoft Word and Audacity (2018) by two transcribers: a native speaker of English and the researcher, a native speaker of Polish. The first transcriber focused on content only, while the second corrected and completed the transcriptions, also indicating pauses and instances of non-verbal communication. Any proper names that could potentially reveal the participants' identity were not included in the transcriptions but transcribed as "XXX".

As indicating boundaries of individual Intonational Phrases would have been challenging and beyond the remit of this study, a decision was made to only indicate pauses. For the purposes of this study, no distinction was made between within- and end-of-sentence pauses. A pause was regarded as a gap in speech production, either silent or filled by an audible breath or noises such as throat clearing. Filled pauses were indicated as "um" regardless of their actual quality. While by no means perfect, this approach was deemed sufficient to indicate instances where connected speech phenomena, such as intrusive /r/, could be expected.

The following transcription key was used for all free speech transcriptions:

- I – Interviewer
- P – Participant
- **<> overlapping speech/interruptions
- () unintelligible
- [] nonverbal communication
- - false start/incomplete word
- ... pauses
- “” a quotation
- um filled pauses
- : syllable/sound lengthening

All transcriptions are available in Appendix II.

One issue that emerged during the transcription process was how to approach contracted forms of “to be”, as in the researcher’s experience, in Polish-accented English, forms such as “you’re”, “we’re”, “they’re” are sometimes homophonous with “you”, “we” and “they” respectively. Among all the participants, even some of those with higher levels of proficiency in English produced clauses such as “they saying” instead of “they’re saying”, or “you talking” instead of “you are talking”. These could be obviously interpreted as purely grammatical errors; an omission of the auxiliary verb “to be”. However, an alternative explanation is that these productions were the result of imperfect acquisition of the centring diphthongs /ɪə/, /ʊə/, and /eə/, or indeed a lack thereof. From that perspective, these realisations could simply be an attempt on the speakers’ part to produce a non-rhotic form of the contraction in question, which in their accent simply happen to be homophonous with subject pronouns; for example, both “we” and “we’re” realised as [wi:] or [wi:]. This explanation is further supported by the fact that some of the participants who produced such forms demonstrated relatively high grammatical accuracy otherwise. Nevertheless, since it was not possible to determine the rationale why the participants produced forms which both transcribers recognised as, for example, “we talking”, all such forms were transcribed as heard, i.e. without the auxiliary verb. A possible impact of that decision is that the ratio of rhotic versus non-rhotic realisations might be skewed in favour of the latter, as by interpreting what might essentially be non-rhotic variants as grammatical errors eliminated them those tokens from further analysis. However, it was felt that this interpreting every

instance of, for example, “we talking” as “we’re talking” would have been even more difficult to justify.

3.6.1.3 Preparing Speech Data for Auditory Analysis

Once all the transcriptions had been completed, all tokens of interest, i.e. words with postvocalic /r/, were identified using the search option in Microsoft Word and highlighted. For each individual participant, a table was created in Microsoft Excel and all highlighted tokens were transferred onto the tables along with each token’s immediate context, i.e. both the preceding and the following word. All the resulting word lists were checked against the recordings played back in Audacity (2018), and every individual item’s timing was indicated in the minutes/seconds/milliseconds format. In addition, all tokens containing a word-final postvocalic /r/ were coded either as pre-pausal, pre-consonantal, pre-vocalic, or preceding a word-initial /r/:

- 1 = pre-pausal;
- 2 = pre-consonantal;
- 3 = pre-vocalic;
- 4 = preceding a word-initial /r/.

All category four words were rejected from further analysis, as in most cases it was not possible to determine whether the /r/ pronounced at the end of the word should be treated as the token-final segment or simply the initial segment in the following word. Category three words were included in order to investigate the frequency of intrusive /r/ use.

Words which are not a part of the English language, but were made up by participants, were excluded from further analysis. Quotations were not included in further analysis, unless the participants were quoting themselves. The reason for this was that when quoting others, many participants parts were trying to imitate their accents, including perhaps /r/ realisations or distribution, which meant that those stretches were not representative of their “normal” accent. Tokens which had been marked as “trailing off” were also rejected from further analysis, as words in those were often incomplete. If a word was surrounded or followed by a stretch of unintelligible speech, it was also rejected from further analysis.

In addition, both for word list tokens as well for the tokens extracted from free speech recordings, the following approach was adopted: in the case of false starts involving repetitions of a word, only the final production was selected. If a participant mispronounced

a word, and then self-corrected, only the "correct" production was selected. If there was self-correction from the "correct" variant to an incorrect one, only the "correct" production was included for further analysis. If a participant got self-conscious about a word he had managed to pronounce correctly, although perhaps carefully or in a hesitant manner, and repeated the word, only the most natural-sounding, the most confident production was selected.

3.6.1.4 Auditory Analysis

Once all the tokens had been extracted, they were subject to auditory analysis by the researcher. The procedure was the same for the free speech data and the word list data: audio recordings were played back using Audacity (2018) through a pair of Philips Fidelio M1 headphones connected to a Line 6 UX1 audio interface. Each token was played back three times and assigned to one of the categories presented below. If it was not possible to make a relatively confident decision on what category a token belonged to after three consecutive plays, the syllable containing the relevant segment was played back in isolation three more times, which was followed by three more playbacks of the whole word.

As often practised in similar studies, for example Sharma (2011), in order to check the reliability of the auditory analysis, 20% of word-list as well as free-speech data were blindly coded by an inter-rater, a phonetically-trained native speaker of English with years of expertise in teaching English pronunciation to speakers of other languages and a fluent command of Polish, who followed the same procedure outlined above.

3.6.1.4.1 The Categories for Auditory Analysis

The categories devised for the pilot study were based on the perceived "strength of rhoticity" and were inspired by Heselwood et al. (2010), whose study investigated listener sensitivity to the allophonic variation in approximant /r/ realisations. In order to assess the "strength of rhoticity", Heselwood et al. (2010, p. 332) employed the following rating scale:

5 = strongly rhotic, e.g. [ɹ];

4 = moderately rhotic, e.g. [ɹ];

3 = weakly rhotic, e.g. [ɹ];

2 = schwa-type offglide, e.g. [ɛə];

1 = shorter, less prominent offglide, e.g. [ə];

0 = absorption by preceding vowel into a monophthong, e.g. [ɜ:].

Based on this, the following categories were used in the pilot study:

0 = non-rhotic

1 = weakly rhotic

2 = moderately and strongly rhotic

3 = rhotic, Polish-sounding: lenited taps

4 = rhotic, “stereotypically” Polish-sounding: taps and trills

However, during the pilot data coding stage it became apparent that categories based on perceived “strength of rhoticity” were problematic for the purposes of this study for a number of reasons. Firstly, the very concept of “the strength of rhoticity” turned out rather hard to operationalise. While Heselwood et al. (2010) demonstrated that listeners with phonetic training had a relatively high level of agreement on the impression of strength of rhotic tokens, their scale seemed to equate perceived strength of rhoticity with the nature of the constriction along the palatal vault only, and not taking into consideration other articulatory characteristics, such as e.g. labialisation or narrowing in the pharynx, which are employed by many English speakers, and which also contribute to the perception of “rhoticity”. For example, Delattre and Freeman (1968) pointed out that experiments with an electronic analogue of the mouth revealed that the “auditory impression” of the American English /r/ was enhanced when the constriction along the palato-velar vault was accompanied by another constriction in the pharynx (see Literature Review, section 2.2.3.3.1). Therefore, it was felt that a scale based on the “strength of rhoticity” as adapted from Heselwood et al. (2010) did not account for the complexity of the phenomenon that is the perception of rhoticity. While it used the different tongue positions on the degree of retroflexion scale for its defining points, it did not take into account other articulatory properties of the stimuli, i.e. what articulatory configurations the impressionistic criteria employed actually corresponded to.

Another reason why a scale based on the perceived strength of rhoticity was problematic was that, as the pilot study demonstrated, without clear articulation-based reference points, the researcher’s perception of strength was clearly influenced by the context in which the tokens occurred. For example, if several tokens in a sequence were perceived as strongly rhotic (2), the perception of the following, moderately rhotic token (also 2) was affected by the contrast

between the two realisations, with the latter token being classified as weakly rhotic (1) rather than moderately rhotic (2). As a result, the distinction categories 1 (“weakly rhotic”) and 2 (“moderately and strongly rhotic”) was almost arbitrary and heavily affected by the quality of the surrounding tokens, which clearly affected internal consistency of the analysis.

It is for those reasons that the coding categories were amended for the main study and clearly based on articulatory descriptors. While it needs to be acknowledged that auditory analysis, i.e. one based on speech perception, cannot fully account for the actual articulation process, it was felt that referring to articulatory configurations provided more reliable reference points than the more abstract labels related to “strength of rhoticity”. The following categories were employed in the main study:

1. /r/=Ø. This category comprised all tokens with no constrictive /r/ variants, where the postvocalic /r/ was simply absorbed into the preceding vowel; a distribution pattern which is characteristic of GB;
2. offglides, r-coloured vowels and approximants. This category comprised offglides which occurred not as part of centring diphthongs, as in for example /eə/, as these were included in the previous category, but where a schwa-like sound followed a “steady-state” vowel, for example /ɔ:/. The approximants included in this category were either post-alveolar, retroflex or bunched /r/ realisations typically associated with GB, GA, or other popular “native” varieties of English, albeit, in the case of GB, approximant realisations are employed for prevocalic /r/ only. Other “non-standard” approximants, for example labial, labiodental or velar ones, were not included in this category;
3. flaps, taps, and “missed” taps. Alongside flaps, the category comprised tokens with clearly-articulated taps with strong closures; taps with weak closures, often followed by friction and “missed”, i.e. lenited taps which often occur in Polish (Jaworski & Gillian, 2011) and are either short fricatives or approximants;
4. trills and lenited trills. The category comprised trills as trilled fricatives, which are stereotypically associated with Polish despite being “extremely uncommon” in this language (Stolarski, 2015);
5. other. This category comprised realisations not associated with either the participants’ L1 or L2; in other words, variants which could not be explained by linguistic transfer from L1 and which employed articulatory configurations different from those normally employed in L2, for example, velar approximants or fricatives.

The table below summarises all the categories employed for coding the speech data.

Table 2

Categories Employed for Auditory Analysis

L2 (English)			L1 (Polish)		other
L2-like distribution L2-like variants	L1-like distribution L2-like variants	L1-like distribution L1-like variants			
non-rhotic	rhotic				
/r/=∅	offglides, r-coloured vowels, approximants	taps and "missed" taps	trills, trilled fricatives		
1	2	3	4		
				5	

3.6.1.4.2 Approach and Challenges to Auditory Analysis

The first issue was related to vowel quality. Since the precise phonetic quality of the vowel preceding the /r/ investigated was not within the remit of this study, a great deal of variability in vowel realisations was allowed both in free speech as well as word list tokens.

For free speech tokens, the actual quality of vowel was ignored as long as the structure of the syllable remained intact, i.e. the word-final /r/ in a given lexical item remained final. However, since the purpose of the word list was to elicit /r/ in different environments in order to investigate the influence of neighbouring segments on non-prevocalic /r/ realisations, tokens in the word list were subject to stricter restrictions. Tokens with mispronounced vowels were marked as such and excluded from further analysis of internal constraints.

L1-accented vowels were not labelled as “mispronounced” as long as the word was still deemed recognisable, i.e. the deviations from the “standard” form could be regarded as non-contrastive; for example, for <work>, pronunciations such as [wɜ:k], [wɜk], [wɜ:k], [wɜk], [wɛ:k], [wɛ:k], [wɛ:k] were all accepted, but if a token bore more resemblance to the NORTH/FORCE [wɔ:k] or the LOT set [wɒk], it was labelled as “mispronounced vowel”.

For letter words, the exact phonetic quality was not considered important as long as the vowel produced was somewhat reduced, i.e. the speaker did not clearly follow the orthographic pronunciation. For example, “transferor” with the last vowel pronounced as, for example, [ə] or [ɤ] rather than a schwa-like vowel was also labelled as “mispronounced vowel”.

The second issue was related to mispronounced tokens. Since free speech tokens were not analysed in terms of the impact of neighbouring segments on the postvocalic /r/, but simply used

to calculate an /r/-fullness index for each speaker, pronunciation “errors” such as mispronounced/elided segments or incorrect lexical stress placement were ignored. Only non-words were excluded from the final analysis.

With word list tokens the approach was again different, in that tokens were labelled as “mispronounced” and excluded from further analysis if they were affected by any or a combination of the following:

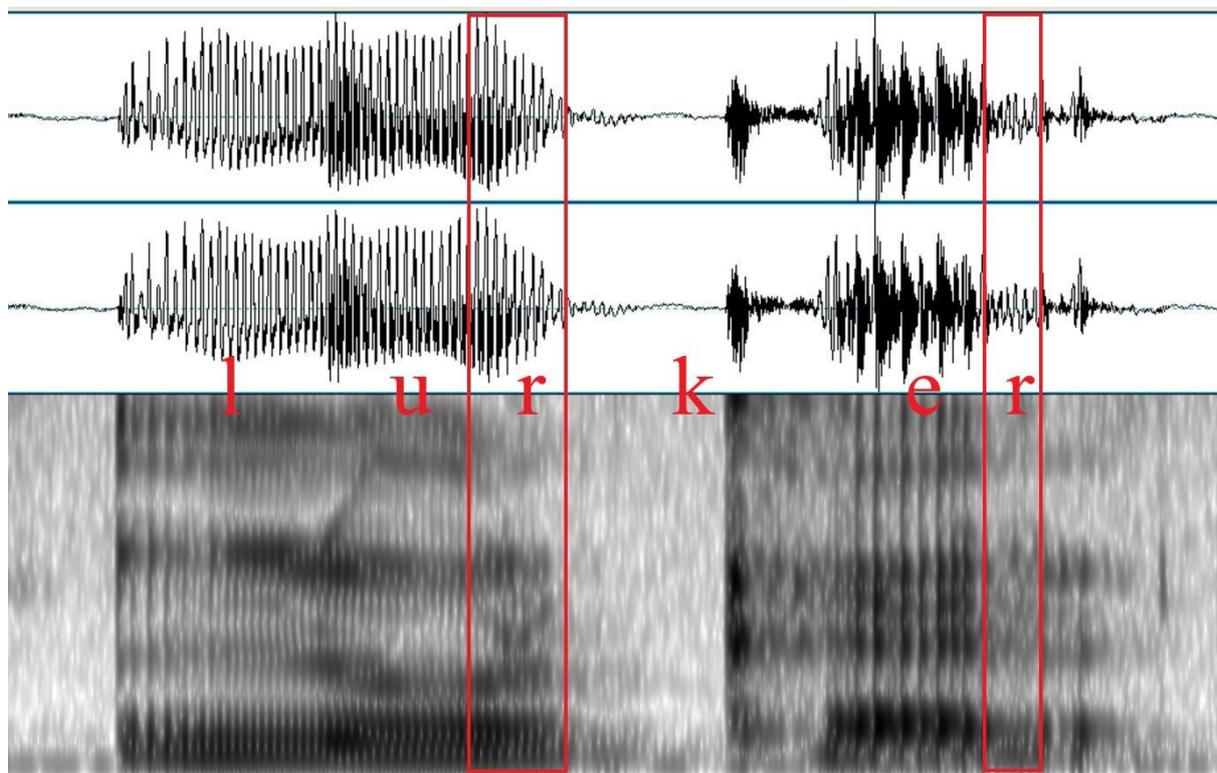
- misplaced lexical stress, e.g. /'ɒkeə/ instead of /ə'keə/ (“occur”);
- missing segment(s) in syllable codas, e.g. /kɑ:/ instead of /kɑ:d/ (“card”);
- extra segment(s) in syllable codas, e.g. /kɑ:d/ instead of /kɑ:/ (“car”);
- changed place of articulation of segments in syllable codas, so that the coda produced belonged to a different category, e.g. a velar consonant (C) instead of bilabial one (A);
- changed order of segments, e.g. “catered” pronounced as ['keɪtɪəd] rather than ['keɪtə-d] or ['keɪtəd];
- mispronunciation or omission of the preceding /r/, which was significant for investigating the effects of priming, e.g. “rear” pronounced as [ɪə] instead of [rɪə];
- potential liaison/coarticulation effects from the following token on the list, which was the case if the subject had failed to pause between individual wordlist items as requested.

Another difficulty encountered at the stage of auditory analysis concerned dealing with “non-canonical” realisations, i.e. those which did not easily fit within the pre-defined categories. Although it is clear that no two phones are ever identical, some speakers displayed relatively low levels of variability and consistently employed two or three allophones, which could be relatively easily categorised, for example /r/= Ø, [ɹ] and [ɹ̥], while others displayed high levels of variability, employing a wide range of relatively idiosyncratic realisations that could not always be easily classified through impressionistic or even acoustic analysis, without resorting to ultrasound imaging (UTI) or magnetic resonance imaging (MRI).

One such difficulty concerned the distinction between genuine, “intended” approximants, which were assigned to category two, and the type of lenited taps (category three) effectively realised as approximants. However, it was decided that length could be employed as a sufficient criterion to distinguishing between the two variants. Lenited taps, being the result of articulatory undershoot, are characterised by a short constriction phase of about 30 - 40 ms resulting from the brevity of the apical gesture (see section 2.2.2.2), which is why it was expected that the duration of the “missed” taps, as they occur in Polish, would be significantly shorter than the duration of “true” approximant, as characteristic of English, which indeed seemed to be case. An example of such a “missed tap”, as pronounced by P22SJ in the final position of the word “lurker”, is shown in Figure 10.

Figure 10

A Waveform/Spectrogram of the Word “Lurker”



Note. The word "lurker" as pronounced by P22SJ during the WL task. The word-final /r/ is realised as a lenited tap with a duration of the closure phase (indicated) of about 29 ms.

As presented in the spectrogram (Figure 10), the word-final /r/ is not characterised by a complete closure typical of taps: acoustic energy is only briefly weakened by the apical gesture. However, due to its short duration typical of a tap, i.e. about 29 milliseconds, formants are stable throughout the segment: the variant lacks the typical F3 lowering

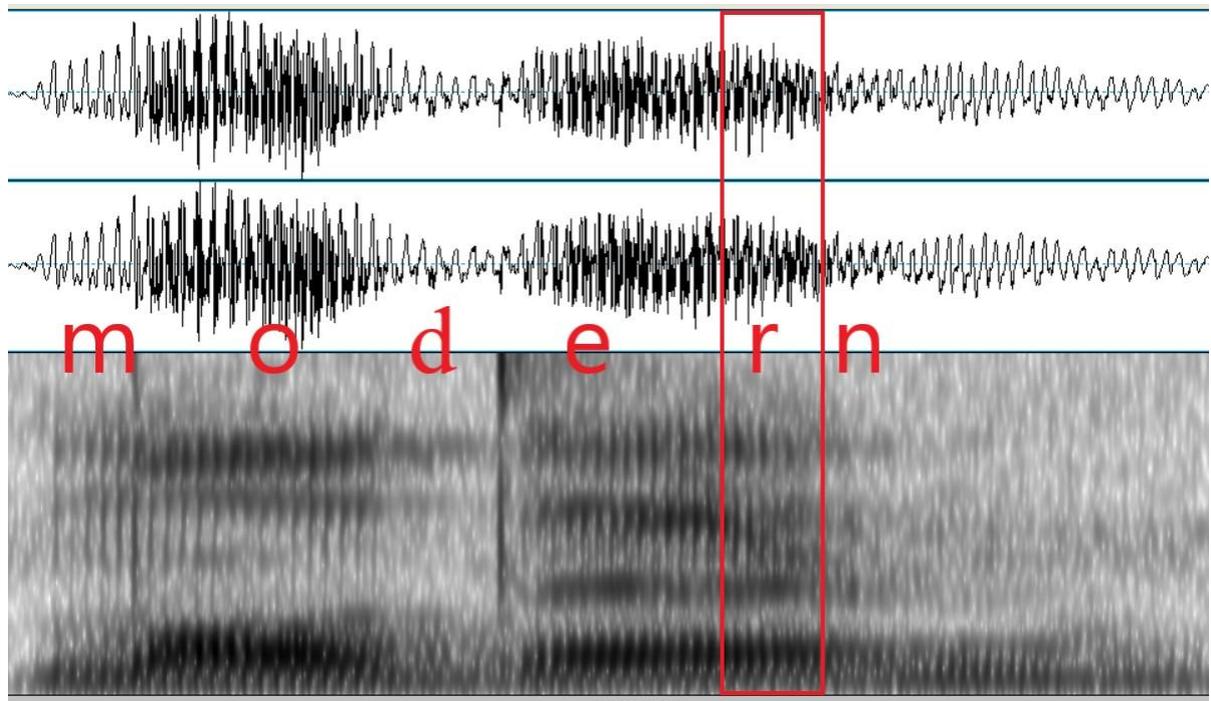
characteristic of English approximant /r/, which corresponds with Jaworski's (2010) observations (see section 2.2.4.1.3 for details).

Such variants were impressionistically difficult to distinguish from fully articulated taps (ones with strong closures), which is why no attempt was made to make this distinction; instead, category three comprised both taps and lenited taps, which allowed for coding consistency.

However, several participants seemed to produce "intermediate" variants, with duration impressionistically shorter than that of English approximants, and yet longer than that of Polish taps, which led to the question of how such realisations should be categorised. An example of such "intermediate" realisations is presented in Figure 10, where the first /r/ in the word "lurker" is realised as an approximant which is only marginally longer than a canonical tap, has the duration of about 50 milliseconds. Another example is demonstrated in the spectrogram in Figure 11, where the /r/ segment in the word "modern" has a similar duration of 50-60 milliseconds.

Figure 11

A Waveform/Spectrogram of the Word "Modern"



Note. The word "modern", as pronounced by P04BK during the Word List task. The /r/ segment was labelled as "intermediate", with a visible dip in F3 characteristic of English [ɹ], yet the relatively short duration of about 50 ms.

Since the duration of such variants seemed to fall in between taps and approximants, it was difficult to evaluate it perceptually; in addition, raters' judgements were also somewhat influenced by the quality and length of preceding or following tokens. Therefore, considering the limitations of auditory analysis, any token perceived as an "intermediate" variant, i.e. one difficult to classify as a tap or an approximant, was assigned to the "Polish-like" category, i.e. category three for the sake of consistency.

Yet another difficulty in categorisation concerned approximants realised with friction. These were produced by several participants mainly in the word-initial position, in tokens included to test for priming effects, such as "rear" or "ringworm". Due to labialisation (see Literature Review, section 2.2.3.3.1), friction accompanying word-initial /r/ is not uncommon in native speech, so it could be assumed that such realisations belonged with other English-like variants. Moreover, since investigating /r/ in the word-initial position was not within the remit of this study, categorising those realisations would not have been of immediate concern; however, approximant-like realisations followed by friction were also found in syllable codas.

Again, the issue here was whether those realisation should be categorised as English-like approximants despite the friction (category two), or as Polish-like sounds (category three). If the duration of those segments was perceptually short, they could be regarded as lenited taps and assigned to the relevant category (category three). Especially in closed syllables, in words like "letters", the frication in the /r/ could be explained by coarticulatory effects; if the /r/ was realised as a "missed tap" with frication, this could have been due to the anticipatory effects of the following fricative /s/. However, if the perceived duration of /r/ was more consistent with English approximants, and yet it was accompanied by clear friction, then the that issue arose was whether this sound was to be coded as L2-like (English-like) or L1-like (Polish-like). Ultimately, a decision was made to classify those variants, together with lenited taps, as Polish-like variants; this decision was taken on the premise that in GB no friction would typically occur in this context (Shockey, 2008).

3.6.1.5 Acoustic Analysis

Once auditory analysis had been completed, 10% of all speech data, both word-list and free-speech tokens, were subjected to visual inspection of sound wave images and spectrographic images using Praat (Boersma, 2001), which is a specialised, free programme for phonetic analysis. Ten percent of tokens for every participant were randomly selected using an Excel

formula. If any of the randomly-selected word list tokens had been labelled as “mispronounced” during auditory analysis, the following token was used for acoustic analysis instead; if there were no following tokens, a preceding token was selected instead.

Sound files in high-quality “.wav” format were imported into Praat using the “Open long sound file” option and the randomly selected tokens were located and displayed as a sound wave image as well as a spectrogram. Each spectrogram was inspected visually, and a tentative decision was made regarding manner of articulation. Each token was then played back 3 times with the researcher inspecting the visual representations, and finally a decision was made regarding the category each token was to be assigned to. The categories employed were the same as the ones used for auditory analysis (see section 3.6.1.4.1). Using the Microsoft Windows Snipping Tool, a screenshot of each spectrogram was taken. For free speech spectrograms, roughly one preceding and one following segment was included in the capture. Due to space limitations, spectrograms of data analysed in this study have not been included in the Appendices section; however, the whole set of spectrograms can be made available on request.

It is important to point out that the purpose of acoustic analysis was to crosscheck and validate the classification of tokens conducted through auditory analysis. The aim was not to pinpoint the exact acoustic correlates of rhoticity for every token displayed as a spectrographic image, but to establish whether there was anything in spectrograms which clearly contradicted what had been established in the process of impressionistic analysis. The main rationale for this was that what is perceived as an impression of rhoticity is the result of many possible articulatory configurations, where very different articulatory configurations may have very similar or even the same acoustic correlates (see Literature Review, section 2.2.3.3.4). As a result, it is not possible to establish without any reasonable doubt the exact manner of place of articulation for a given sound, which also applies to the various approximant /r/ realisations. Moreover, the situation is further complicated by the fact that any exact formant measurements would be difficult to interpret, as the quality of the vowels preceding the postvocalic /r/ under investigation varied significantly not only between participants, but also within each participant’s repertoire. Finally, the quality of speech data recordings made acoustic analysis challenging at times, as, to some extent, the high quality of recordings which might have been possible in an acoustically-treated environment was sacrificed for the sake of obtaining richer, more authentic speech data, albeit, at least in a few cases, of noticeably inferior quality. Moreover, the quality of free speech recordings was

usually inferior to that of word list recordings. This was possibly due to the fact that during the former the former the participants were often more relaxed and often moved more, usually away from the recorder, which resulted in higher ratios of noise to signal, making the spectrograms more difficult to read. It is for those reasons that a decision was made to treat acoustic analysis as a tool ancillary to auditory analysis rather than an independent tool.

As mentioned in the literature review, the most universally accepted correlate of rhoticity for English approximants is the lowering of F3 (Espy-Wilson, 2004; Espy-Wilson et al., 2000; Ladefoged, 2003; Ladefoged & Disner, 2012) or the proximity of and F3 (Foulkes & Docherty, 2001; Lindau, 1985; Lindsey, 2012b). Both of these were used as clues to confirm the impression of rhoticity. Many participants produced variants which were relatively weak impressionistically, sometimes displaying only a “hint” of /r/-colouring, which were difficult to categorise using only auditory analysis. It is in those cases that acoustic analysis was particularly useful, as the presence of a dip in F3, or lack thereof, helped to verify the results of auditory analysis.

However, it was expected that different speakers would employ different articulatory strategies for /r/, which would result in different acoustic correlates of rhoticity, while having diverse speakers would result in different formant values; therefore rather than focus solely on F3 or look for specific formant values, the visual inspection focused more broadly on observing formant movement. Indeed, in a number of cases a clear impression of rhoticity was barely reflected in a drop in F3 value, but was accompanied by a very clear dip in F4.

3.6.2 Semi-structured Interview Data Analysis

3.6.2.1 Socio-Economic Status

In order to code the participants’ employment situation and corresponding social status, categories proposed by National Readership Survey (NRS) were used. NRS is a non-profit, but commercial British survey which provides estimates on the number and nature of readers of British newspapers and magazines. The demographic categories proposed by the NRS are a common tool for classifying and describing social classes e.g. in consumer targeting. Information on the participants’ employment history and their current job situation obtained during the semi-structured interview and also provided in the questionnaire was considered, and a corresponding occupation category (see Table 3) was selected.

Table 3

Demographic Classifications in the UK and the ABC1 Grades .

Social Grade	Social Status	Occupation
A	upper middle class	higher managerial, administrative or professional
B	middle class	intermediate managerial, administrative or professional
C1	lower middle class	supervisory or clerical, junior managerial, administrative or professional
C2	skilled working class	skilled manual workers
D	working class	semi and unskilled manual workers
E	those at lowest level of subsistence	state pensioners or widows (no other earner), casual or lowest grade workers

For the purposes of statistical analysis in SPSS, each ABC1 grade was assigned a number, i.e. A = 1, B = 2, C1 = 3, C2 = 4, D = 5 and E = 6.

3.6.2.2 Qualitative Data Analysis

Notes taken during the semi-structured interviews were scanned, typed up, checked against the recordings and completed; the resulting transcriptions were finally translated into English (by the researcher, who is also a qualified translator).

The method adopted for the analysis of qualitative data was Thematic Analysis (TA) (Braun & Clarke, 2022; Terry et al., 2017), which is a technique that originated in qualitative research in the field of psychology, where it is still widely employed. According to Braun and Clarke (2022), TA can be considered as closer to a “trans-theoretical tool” (p. 1) or a “family of methods” (p. 5) rather than a distinct methodology, which is why it allows a considerable degree of flexibility, both in terms of the choice of theoretical framework and research design.

The specific type of TA employed in this study was reflexive TA, which aims to explore “the truth or truths of participants’ contextually-situated experiences, perspectives and behaviours” (p. 14) while embracing the unavoidable subjectivity of data coding and analysis. In accordance with Braun and Clarke (2022) and Terry et al. (2017), the analysis involved several sequential, interconnected steps, with a degree of back and forth movement between the phases, ultimately resulting in a recursive process. The general process was as follows: having familiarised himself with the dataset through reading and re-reading of the interview

transcriptions, the researcher took notes on his initial insights. This was followed by the coding phase: short codes were created in order to label features of the data related to in-group stereotypes of Polish migrants, beliefs about “native” English, Polish-accented English and evidence of any metapragmatic discourse regarding /r/; these were indicated in the dataset using different colours. A list of initial themes, i.e. patterns sharing a central concept or idea, was then generated through inspecting the codes and collating data. Those themes were then checked against the coded data and the entire dataset to establish to what extent they answered the research questions. At this stage, additional themes were developed through splitting more general themes, while several others were discarded as not relevant to any of the essay questions. A detailed analysis of each theme was conducted, which involved establishing the focus and the scope of each theme and a narrative was produced to contextualise the findings in light of existing literature.

3.6.3 Questionnaire Data Coding

All the participants had completed a paper version of the questionnaire. Completed questionnaires were scanned and all the answers provided as “ticks” on the scales were then transferred as numbers onto a Microsoft Excel spreadsheet. All the statements keyed positively and negatively were identified and coded using green and red respectively. Finally, following Gardner (2010), answers to the positively-keyed items were scored in the following way:

Table 4

Scoring of the Positively-Keyed Questionnaire Scales.

Point on the scale	Value assigned
'strongly disagree'	1
'moderately disagree'	2
'slightly disagree'	3
'slightly agree'	5
'moderately agree'	6
'strongly agree'	7

The following reverse scoring was applied to negatively-keyed items:

Table 5

Scoring of the Negatively-Keyed Questionnaire Scales.

Point on the scale	Value assigned
'strongly disagree'	7
'moderately disagree'	6
'slightly disagree'	5
'slightly agree'	3
'moderately agree'	2
'strongly agree'	1

3.6.4 Social Networks and Language Use Data Coding and Analysis

During the final part of the data collection session each participant was asked to name their contacts and then to provide additional information on each contact, including the domains they would interact in, the estimated amount of time spent interacting and the language(s) used for interaction. Following the session, researcher's notes taken during the interviewed were scanned and then checked against the recording. The data was then transferred onto an Excel spreadsheet.

For each participant, the number of named contacts was counted. Since the participants were not instructed on how many contacts they were supposed to name, but only asked to name the people they would most regularly interact with in the various domains, some participants were more diligent than others, and apart from naming individuals, they also named people "in bulk"; for example, "ten other colleagues who work in my department".

Taking into account data provided for every contact, the estimated number of hours per week spent interacting in English and Polish, as well as other languages (where relevant), was calculated. It is important to point out that the estimated number of hours the participants reported spending in active interactions with someone was not approached as a genuine measure of the amount of L2 interaction; instead, it was devised more as a measure of intensity of engagement with the individuals or groups the participants listed, as well as a measure of engagement with the language they used to interact with these contacts. For example, P26NM reported spending more hours actively interacting with his mainly English-speaking contacts than there are actually hours in a week.

All the contacts named individually were included in the analysis as separate entries, while the contacts listed “in bulk” were approached as a group, with their interaction time totalled. This decision was also taken on the premise that if a participant did not name someone individually despite explicit instructions to do so, then perhaps the people named “in bulk” indeed did not play an important role in that person’s social networks.

The numbers were compared and percentages were calculated; this resulted in an “English Use index”.

3.7 Statistical Analysis

All quantitative data were organised and coded in Microsoft Excel 2007; they were subsequently imported into IBM SPSS (version 27), where all the statistical tests were performed.

3.7.1 Interrater Reliability

In order to check the robustness of the established categories and cross-check the results of auditory analysis, 10% of randomly selected tokens were subjected to acoustic analysis. In addition, 20% of tokens were blind-coded by a phonetically trained interrater.

In order to determine the agreement between the impressionistic and the acoustically-informed judgements, as well as the researcher’s judgements, percent agreement ratings were calculated. Although studies commonly use the Cohen’s kappa (κ) to test agreement (Cantor, 1996), κ was not suitable for the purpose of this study, since only a randomly-selected subset of speech data had been subjected to both acoustic analysis and moderation. Such randomly-selected subsets did not always contain tokens to represent all the /r/ categories each individual participant employed and which were present in the full data set. For example, if a participants produced mainly approximants (category two) and non-rhotic variants (category one) and only a low number of taps (category three), the randomly selected subset of tokens to calculate agreement was not likely to contain any tokens from the “taps” category. Therefore, instead of κ , percent agreement ratings were calculated using contingency tables (Crosstabs). A major weakness of this approach is that it does not account for chance agreement, however, given the discrepancy between the scales employed in both data sets, percentage agreement was the only option available.

For acoustic analysis judgements, agreement ratings calculated per participant ranged from 74.% to 100%, with mean percent agreement value at 94%. The mean level of agreement

between the two raters was 80.2%. Although such a result for independent blind coding seems high enough to support the robustness of the categories employed, it is possible that a higher value would have been obtained had the two raters used the same audio equipment, i.e. audio interface and headphones, which, unfortunately, was not possible for practical reasons, such as working remotely due to Covid restrictions. In addition, although both raters were phonetically trained and were bilingual in the same languages, i.e. were both fluent in Polish and English, the first rater's L1 was Polish, while the second rater's L1 was British English. This could have influenced their perceptions of how "English-like" or "Polish-like" the tokens sounded and thus may have affected the final agreement value. However, the latter issue could also be interpreted as an advantage, since the relatively high agreement score of 80.2% between two raters with different L1 backgrounds suggests that phonetically trained listeners' perception of the categories employed could not be simply attributed to a shared L1, which indicates that, to a large extent, the results can be replicated.

3.7.2 Main Statistical Analysis

Once auditory, acoustic and interrater judgements had been compared, impressionistic analysis data was subject to further tests. The statistical analysis in this study consisted of two main parts with two different observation units: 1) participants and 2) speech tokens. The former investigated the relationship between the socio-attitudinal and acquisitional factors and the participants' non-prevocalic /r/ realisations (RQs 3b, 3c, 4, 4a), while the latter examined the relationship between phonetic context, i.e. neighbouring segments and stress, and non-prevocalic /r/ realisations (RQ 1a, 2a, 3a). Since each of those observation units required different data organisation in SPSS, two separate databases were created to include all the relevant variables.

3.7.2.1 Observation Unit: Participants

The purpose of the statistical analysis procedures described in this section was to investigate how the various characteristics of participants, i.e. their social and professional background, attitudes and L2 acquisitional trajectories, influence their pronunciation of non-prevocalic /r/.

3.7.2.1.1 Dependent Variables

Dependent variables were calculated based on the tokens elicited in the Word List and Free Speech tasks. The number of the various /r/ productions (categories 1-5) as well as mispronounced tokens was counted for each participant's performance on the Word List task and the Free Speech task respectively. The percentage of tokens labelled as "mispronounced"

through auditory analysis (AA) tokens was calculated for the Word List (WL) tokens (% of mispr in AAWL) only, as false starts or words mispronounced to the extent that they were no longer fit for the purposes of this study occurring in the Free Speech (FS) task had been rejected before the coding stage. For every participant, mispronounced tokens were excluded from further calculations. Subsequently, the percentage of each category (1-5) was calculated for both the Word-List (% of 1s in AAWL – % of 5s in AAWL) and the Free-Speech tokens (% of 1s in AAFS - % of 5s in AAFS) as well as both (% of 1s in AATotal - % of 5s in AA.Total).

An /r/-fullness index was calculated for every participant based on their Word List tokens (AAWL), Free Speech tokens (AAFS) and both (AATotal). The index was a mean of each participant’s realisations; however, realisations coded as belonging to category 5 were not included, as the category comprised a number of different, often idiosyncratic /r/ realisations, and as such could not be placed on the “/r/-fullness continuum”, which ranged from non-rhotic productions to clearly articulated trills, or from L2 (English) - like realisations to stereotypical L1 (Polish)-like variants. Once those dependent variables had been calculated, data distribution was checked for normality using the Shapiro-Wilk test (Field, 2013). Table 6 below presents all dependent variables employed in this part of the analysis.

Table 6

Dependent Variables Employed in the Observation Unit: Participants Part of Analysis.

Dependent Variables	Description	Normal Distribution
AAWL /r/-fullness in dex	/r/-fullness index calculated on the basis of Word List tokens	Yes
AAFS /r/-fullness index	/r/-fullness index calculated on the basis of Free Speech tokens	Yes
AATotal /r/-fullness index	/r/-fullness index calculated on the basis of combined Word List and Free Speech data sets	Yes
% of 1s in AAWL	The percentage of category one tokens in the Word List data set	No
% of 2s in AAWL	The percentage of category two tokens in the Word List data set	No
% of 3s in AAWL	The percentage of category three tokens in the Word List data set	No
% of 4s in AAWL	The percentage of category four tokens in the Word List data set	No
% of 5s in AAWL	The percentage of category five tokens in the Word List data set	No
% of mispr in AAWL	The percentage of mispronounced tokens in the Word List data set	No
% of 1s in AAFS	The percentage of category one tokens in the Free Speech data set	Yes
% of 2s in AAFS	The percentage of category two	Yes

	tokens in the Free Speech data set	
% of 3s in AAFS	The percentage of category three tokens in the Free Speech data set	No
% of 4s in AAFS	The percentage of category four tokens in the Free Speech data set	No
% of 5s in AAFS	The percentage of category five tokens in the Free Speech data set	No
% of 1s in AATotal	The percentage of category one tokens in the combined Word List and Free Speech data sets	No
% of 2s in AATotal	The percentage of category two tokens in the combined Word List and Free Speech data sets	No
% of 3s in AATotal	The percentage of category three tokens in the combined Word List and Free Speech data sets	No
% of 4s in AATotal	The percentage of category four tokens in the combined Word List and Free Speech data sets	No
% of 5s in AATotal	The percentage of category five tokens in the combined Word List and Free Speech data sets	No

3.7.2.1.2 *Independent Variables*

For each participant, mean value was calculated for each construct employed in the socio-attitudinal part of the questionnaire developed following Gardner (2010) and Drummond (2010). These were: Motivation, Integrativeness, Instrumental Orientation to Improve Pronunciation, Anxiety about Speaking English, Attitudes towards the GB Accent and Attitudes towards the GA accent. Although it would have been beneficial to identify the underlying variables using factor analysis and thus perhaps reduce the number of variables in the model, this was not possible due to the fact that factor analysis requires at least five participants per questionnaire item (Field, 2013), therefore a minimum of 165 participants, which was significantly more than was within the scope of this study.

Data distribution for all the variables was checked using the Shapiro - Wilk test. Table 7 below presents all independent variables employed in this part of the analysis.

Table 7

Independent Variables Employed in the Observation Unit: Participants Part of Analysis

Independent Variables	Description	Normal Distribution	Variable Type	Measurement	Collection Method
IELTSFcAver	Average IELTS Fluency and Coherence Grade	Yes	Interval	IELTS grade (0-9)	Free Speech Recordings, IELTS markers' grades
IELTSLrAver	Average IELTS Lexical Resource Grade	No	Interval	IELTS grade (0-9)	Free Speech Recordings, IELTS markers' grades
IELTSGraAver	Average IELTS Grammatical Range and Accuracy Grade	No	Interval	IELTS grade (0-9)	Free Speech Recordings, IELTS markers' grades
IELTSLoEwoPron	Average IELTS Grade <u>not</u> Including Pronunciation	Yes	Interval	IELTS grade (0-9)	Free Speech Recordings, IELTS markers' grades
ENUseIndex	A measure of engagement in the English-speaking social networks	Yes	Interval	percentage	Social networks and language use interview
Age	Age	No	Interval	years (20-40)	questionnaire
Gender	Gender	n/a	Dichotomous	0/1	questionnaire
LoRmonths	Length of residence in the UK	No	Interval	no. of months (1-21)	questionnaire
EducationDegree	The highest qualification received (Vocational, Matura, Bachelor's, Master's, PhD)	n/a	Ordinal	0-4	questionnaire
EducationPlace	The country where the highest qualification was awarded (PL/UK)	n/a	Dichotomous	0/1	questionnaire
EducationCurrentYN	Currently pursuing an academic degree	n/a	Dichotomous	0/1	questionnaire
SocialGradeABC1	Demographic classification - a measure of socio-economic status	n/a	Ordinal	1-5	questionnaire, semi-structured interview
FormalInstructioninEnglishinPolandYN	English language instruction received in Poland	n/a	Dichotomous	0/1	questionnaire
AgeofOnsetofLearningEnglish	Age at the onset of English instruction (at school or elsewhere)	No	questionnaire	years (1-39)	questionnaire
YearsofinstructionPLIt12	Amount of English language instruction	No	Interval	no. of years	questionnaire

	received in Poland until the age of 12				
YearsofinstructionPL1319	Amount of English language instruction received in Poland between the age of 13 and 19	No	Interval	no. of years	questionnaire
YearsofinstructionPLgt19	Amount of English language instruction received in Poland after the age of 19	No	Interval	no. of years	questionnaire
FormalInstructioninEnglishinUK	English language instruction in the UK	n/a	Dichotomous	0/1	questionnaire
PhoneticTraining	Instruction in English phonetics/pronunciation	No	Dichotomous	0/1	questionnaire/semi-structured interview
LengthofinstructionUKmonths	Length of English language instruction in the UK	No	Interval	no. of months	questionnaire
EstimatedLoEuponArrival	Self-assessed English language level upon arrival in the UK	n/a	Ordinal	1-7	questionnaire
EstimatedLoECurrent	Self-assessed current English language level	n/a	Ordinal	1-7	questionnaire
EstimatedLanguageUseOverall	Self-estimated current English language in all domains	n/a	Ordinal	1-5	questionnaire
EstimatedENUsetoSelf	Self-estimated current English language when speaking to oneself	Yes	Interval	percentage	questionnaire
EstimatedENUseMediaSongLyrics	Self-estimated current English language when listening to song lyrics	No	Interval	percentage	questionnaire
EstimatedENUseMediaNews	Self-estimated current English language when listening to the news	No	Interval	percentage	questionnaire
EstimatedENUseMediaEntertainment	Self-estimated current English language for other entertainment	No	Interval	percentage	questionnaire
EstimatedENUseMediaSocialMedia	Self-estimated current English language on social media platforms	Yes	Interval	percentage	questionnaire
WeeksinPLperYear	Average number of weeks per year spent in Poland	Yes	Interval	no. of weeks	no. of weeks
Plans	Future plans regarding returning to Poland or remaining in the UK	n/a	Ordinal	0-4	questionnaire
QMotivation	Motivation	Yes	Interval	1-3, 5-7	questionnaire
QIntegrativeness	Integrativeness	Yes	Interval	1-3, 5-7	questionnaire

QInstrumental	Instrumental Orientation to Improve Pronunciation	Yes	Interval	1-3, 5-7	questionnaire
QAnxiety	Anxiety about Speaking English	Yes	Interval	1-3, 5-7	questionnaire
QAttGB	Attitudes towards the GB accent	Yes	Interval	1-3, 5-7	questionnaire
QAttGA	Attitudes towards the GA accent	Yes	Interval	1-3, 5-7	questionnaire

Since this study collected data from 26 participants, it was not possible to employ multiple regressions in this part of analysis, namely participant level factors. Multiple regressions require the minimum of 50 objects, i.e. participants in this case, as well as 15 more for each independent variable (Bryman & Cramer, 2004), which was significantly more than was within the scope of this study. Therefore, Pearson’s correlation coefficient test was used to measure the strength and direction of association between interval variables with normal distribution; for ordinal variables or interval variables which did not exhibit normal distribution, a non-parametric test, Spearman rho correlation coefficient was employed (Field, 2013). To examine the relationship of dichotomous independent variables and interval dependent variables with normal distribution, Student's T test for independent samples was employed. Mann-Whitney U test was employed for dichotomous independent variables and dependent variables which did not follow normal distribution.

Since the current study was largely explorative, the model employed for this part of analysis contained numerous dependent and independent. An important disadvantage of that approach was that with a 0.05 threshold for significance, that one in 20 tests would produce a significant result by chance, potentially resulting in false positives. Therefore, following practice employed e.g. by Dewaele et al. (2016), Bonferroni correction was used to address the increased chance of Type 1 errors in this part of analysis, which greatly reduced the number of variables identified as statistically significant in this part of analysis.

3.7.2.2 Observation Unit: Words

The purpose of statistical analysis in this section was to investigate how the various phonetic features of words, i.e. the stimuli from the Word List, such as stress, preceding vowel quality or neighbouring consonantal segments, influence the pronunciation of non-prevocalic /r/. In order to avoid confusion, it is important to clarify that for this part of statistical analysis, the term “word” is used to refer to the results “for each” of the 225 Word List items included.

3.7.2.2.1 *Dependent Variables*

Dependent variables for this part of statistical analysis were calculated based on the Word List Data only, as only those items had been coded for phonetic context, and so could be used for this kind of analysis. Both tokens which had been coded as mispronounced as well as those where vowel quality was significantly different from the one that was meant to be elicited (see Methodology, section 3.6.1.4.2) were rejected from this part of analysis.

The number of dependent variables was also reduced in this part of the analysis. First of all, the percentage of category five tokens was not included. These idiosyncratic /r/-realisations were vastly different from each other in terms of articulatory strategies and did not form a uniform group in terms of shared articulatory characteristics. Therefore, it was felt that the category was too internally diverse to be influenced as a whole by any of the specific phonetic context features included as independent variables in this part of analysis. Secondly, since the percentage of category four tokens was low in the data set, the variable was recognised as constant, and an error was reported by SPSS. In other words, there was not enough variance in that variable for SPSS to be able to successfully perform multiple regression analysis with bootstrapping; therefore, that dependent variable was also removed from the model. Therefore, backward multiple regression analyses with bootstrapping were performed for the following dependent variables: the respective percentage of category one, two and three tokens in the Word List data (AAWL.1.perc, AAWL.2.perc, AAWL.3.perc).

Table 8

Dependent Variables Employed in the Observation Unit: Words Part of Analysis

Dependent Variables	Description	Normal Distribution
AAWL.1.perc	The percentage of category one tokens in the Word List data set	Yes
AAWL.2.perc	The percentage of category two tokens in the Word List data set	Yes
AAWL.3.perc	The percentage of category three tokens in the Word List data set	No

3.7.2.2.2 *Independent Variables*

All the independent variables in this part of analysis were properties of words elicited on the Word List task. The complete list of variables employed at this stage of analysis is presented in Table 9 below.

Table 9

Independent Variables Employed in the Observation Unit: Words Part of Analysis

Independent Variables	Description	Normal Distribution	Variable Type	Measurement
FREQUENCY	Lexical frequency	No	interval	0-4620.33
STRESSED	The presence of primary lexical stress	n/a	dichotomous	0/1
Prec.VOWEL.1	SQUARE	n/a	dichotomous	0/1
Prec.VOWEL.2	NEAR	n/a	dichotomous	0/1
Prec.VOWEL.3	NURSE	n/a	dichotomous	0/1
Prec.VOWEL.5	NORTH	n/a	dichotomous	0/1
Prec.VOWEL.6	lettER	n/a	dichotomous	0/1
Prec.CONSONANT	The presence of a preceding consonant (CVr)	n/a	dichotomous	0-1
Prec.CON.TYPE.A	The preceding consonant belongs to category A	n/a	dichotomous	0/1
Prec.CON.TYPE.B	The preceding consonant belongs to category B	n/a	dichotomous	0/1
Prec.CON.TYPE.C	The preceding consonant belongs to category C	n/a	dichotomous	0/1
Prec.CON.TYPE.D	The preceding consonant belongs to category D	n/a	dichotomous	0/1
CODA	The presence of a syllable coda (VrC)	n/a	dichotomous	0/1
CODA.TYPE.A	The consonant in the syllable coda belongs to category A	n/a	dichotomous	0/1
CODA.TYPE.B	The consonant in the syllable coda belongs to category B	n/a	dichotomous	0/1
CODA.TYPE.C	The consonant in the syllable coda belongs to category C	n/a	dichotomous	0/1
CODA.TYPE.D	The consonant in the syllable coda belongs to category D	n/a	dichotomous	0/1
PRIMING.TOTAL_Pre_and_Postvoc	The presence of a preceding <ɾ>, either pre- or postvocalic	n/a	dichotomous	0/1
PRIMING.Prevoc_TOTAL	The presence of a preceding prevocalic <ɾ>	n/a	dichotomous	0/1
PRIMING.Postvoc.VRCVr	The presence of a preceding postvocalic <ɾ>	n/a	dichotomous	0/1
PRIMING.Prevoc.RVCVr	The presence of a preceding prevocalic <ɾ> in the onset of the previous syllable	n/a	dichotomous	0/1
PRIMING.Prevoc.RVr	The presence of a preceding prevocalic <ɾ> in the onset of the same syllable	n/a	dichotomous	0/1

In order to investigate relationships between all the variables in the model, regression analysis was employed; however, while this test can be used for several independent variables, it can include only one dependent variable (Dörnyei, 2007). Since this section of the study included eight dependent variables, regression analysis was performed for each dependent variable. Moreover, in order to examine data at different levels of generality, two different models were constructed: “General”, and “Detailed”, with the latter model examining a higher number of independent variables.

Table 10

The Two Models and the Independent Variables They Comprised

General Model	Detailed Model
CODA	CODA.TYPE.A
	CODA.TYPE.B
	CODA.TYPE.C
	CODA.TYPE.D
FREQUENCY	FREQUENCY
Prec.CONSONANT	Prec.CON.TYPE.A
	Prec.CON.TYPE.B
	Prec.CON.TYPE.C
	Prec.CON.TYPE.D
Prec.VOWEL.1	Prec.VOWEL.1
Prec.VOWEL.2	Prec.VOWEL.2
Prec.VOWEL.3	Prec.VOWEL.3
Prec.VOWEL.5	Prec.VOWEL.5
Prec.VOWEL.6	Prec.VOWEL.6
PRIMING.TOTAL_Pre_and_Postvoc	PRIMING.Postvoc.VRCVr
	PRIMING.Prevoc.RVCVr
	PRIMING.Prevoc.RVr
STRESS	STRESS

Backward regression was selected, as it allows to identify those independent variables which contribute to predicting the dependent variable, while resolving the issue of multicollinearity among the predictor variables (Field, 2013). Multicollinearity occurs when independent variables in a model are not completely independent of each other, but rather change in unison, i.e. are correlated; in such case it is difficult to establish the relationship between each

individual predictor variable and the dependent variable. This negatively affects the precision of the estimated regression coefficients and makes the model difficult to interpret.

Since the independent variable “Frequency”, present in both models, did not have normal distribution, the technique of bootstrapping was employed. The technique allows to avoid changing the scales of variables from interval to ordinal, thus enabling more exact measurements.

The procedure described below was conducted for every dependent variable in both models. First, backward regression with bootstrapping was performed for all available predictor variables. Then statistically non-significant variables, i.e. those with the p-value > 0.05 were then identified, and the variable with the lowest beta value, either positive or negative, was removed from the model. If the results produced two statistically non-significant variables with the same lowest beta value, it was the variable with the next lowest beta value that was deleted from the model. Finally, the whole procedure was then repeated until only statistically significant variables remained in the model, resulting in a reduced model explaining the data. If the variance of a variable was too low to provide 1000 splits, which was signalled as an error in SPSS, that variable was then removed from further calculations.

3.7.2.3 Effect of Preceding /r/ Quality

One of the potential internal sources of variability in post-vocalic /r/ realisations investigated in this study was not only the occurrence of another, preceding /r/ within the same stimulus (word), but also the quality of that preceding /r/, i.e. the way it was realised by the participants. The research question addressed was whether the quality of the “preceding” or “priming” /r/ can predict the quality of the following post-vocalic /r/. All tokens with priming /r/ prevocalic /r/ were divided into five categories (A, B, C, D, E) based on the distance between the two /r/s as well as stress. All Word List tokens were assigned into one of the following categories:

- A - words with a word-initial preceding /r/ (R) before a stressed vowel in the same syllable ('RVr words), e.g. “rear”;
- B - words with a preceding /r/ (R) before an unstressed vowel in the same syllable (RVr words), e.g. “carer”;
- C - words with a word-initial preceding /r/ (R) before an unstressed vowel in the preceding syllable (RV'CVr words), e.g. “repair”;

- D - words with a word-initial /r/ (R) before a stressed vowel in the preceding syllable (RVCVr words), e.g. “Roger”;
- E - words with preceding postvocalic <r> (VRCVr words), e.g. “server”.

Both categories A and C had word-initial priming /r/, but the former category comprised one-syllable words, meaning that the priming /r/ occurred in the same syllable as the following /r/, while in the latter category comprised two-syllable words, with the second, postvocalic /r/ separated from the priming /r/ by a number of segments. Category B differed from those two in terms syllable stress, with the “priming” /r/ preceding an unstressed vowel. Finally, category D comprised words with two postvocalic /r/s, rather than a pre-vocalic and a post-vocalic /r/. All the stimuli in this category contained the “priming” /r/ in the stressed syllable. For each of the categories above, an index based on the total number of distinct priming /r/ realisations for the whole cohort was calculated, resulting in 3-4 different priming /r/ indices for each category. Similarly, corresponding indices were calculated for the following postvocalic /r/. Data distribution was checked using the Shapiro-Wilk test for normality; all the indices except for two (Foll.r.B.2s and Foll.r.C.2) exhibited non-normal distribution, i.e. p-values lower than 0.05.

Since the data did not exhibit normal distribution, Spearman's rho non-parametric test was employed to establish the strength of association between each priming /r/ realisation index and the corresponding index for the following, postvocalic /r/. As the test was explorative, two-tailed test was employed.

3.8 Ethical Procedures

An application to the School Ethics Committee was made prior to commencing the research project. Since no vulnerable participants were involved, obtaining a CRB Check was not necessary. The submission to the Ethics Committee included a completed Ethics Committee Project Submission Cover Sheet, a Project Description, an Information Sheet for the participants, and a Consent Form, which all the participants were given at the very beginning of each individual data collection session. Since it was not possible to reveal the full details on the nature of the study due to potential bias, they were only given true, but very general information on the study, i.e. that the research focused on Polish immigrants’ experiences related to their immigration to the UK and their English language skills.

Data collected has been securely kept on a password-protected computer and backed up on a password-protected portable hard drive. The data have not been made available to anyone apart from the researcher and his supervisors, as well as, in anonymised form, to people directly involved in the research process, i.e. the interrater or the IELTS examiners involved in assessing the participants' English language proficiency. The data obtained have only been used, and will only be used, for academic research purposes. All individuals who took part in the study have been anonymised, and only codes/invented names have been used in the final draft of the thesis to refer to individual participants.

Chapter 4 Results and Discussion

This chapter starts with a short discussion of the results concerning intrusive /r/. The reason for this is that this study has found no evidence for the use of intrusive /r/ in L2 English of Polish migrants in the south of England, which is why it was felt that this result should be briefly addressed before moving on to results concerning the most central /r/ patterns, which needed more space for both presentation and discussion.

Then the chapter presents the results on rhoticity and the use of /r/ variants in L2 English of Polish migrants living the south of England. This is followed by a presentation of findings regarding SLA-related, social and linguistic (phonetic) factors which contribute to variability in rhoticity and postvocalic /r/-realisations, which were obtained in the process of quantitative data analysis. This is then followed by a discussion of the qualitative data, which provide an insight into the in-groups stereotypes and beliefs about accent and /r/-variants shared by the Polish migrants living in the south of England.

4.1 Intrusive /r/

One of the objectives of this study was to establish whether Polish migrants in the south of England make use of intrusive /r/ in their L2 English, as well as to identify potential constraints on the use of that variable (RQs 2 and 2a). For that purpose, three lexical items which may be pronounced by native speakers of GB with word-internal intrusive /r/ were included in the Word List: “drawing”, “thawing”, “withdrawal”. Moreover, free speech recordings were examined for any occurrence of intrusive /r/, either word-internal or across word boundaries.

No evidence for the use of intrusive /r/ was found in the Word List data set or in the Free Speech recordings (RQs 2 and 2a). This result is somewhat surprising, as it had been hypothesised that some participants with high Level of English, English Use Index values and Integrativeness (Gardner, 2010) would make at least some use of this feature to index their “native-like” proficiency in English and/or their integrative orientation.

One can only speculate about the reasons why no evidence for this feature has been found. A potential explanation could be that, at least to the researcher’s knowledge, intrusive /r/ is not taught to learners of English as part of the EFL curriculum in Poland, which is why it is highly unlikely that any of the participants would have received any explicit instruction on, or indeed any significant amount of exposure to that feature prior to their migration, unless they

had studied English phonetics in a tertiary education institution. Moreover, the phonological rules which govern the distribution of intrusive /r/ are relatively complex, which means that adopting the feature would involve either phonetic instruction or a significant amount of exposure to native speaker output, assuming that those NSs use make use of that linguistic feature themselves, which may not be the case, as intrusive /r/, especially word-internal one, is often stigmatised in England (Cruttenden, 2014; Hannisdal, 2007; John Christopher Wells, 1982). Regardless of the reason, no evidence of intrusive /r/ use was found in the collected data. Perhaps a large-scale study involving a substantially larger number of participants would yield different results, but at the moment, the only tentative conclusion that can be formed is that if Polish speakers of L2 English living in England make use of intrusive /r/ at all, it seems to be a rather elusive phenomenon.

4.2 /r/-fullness Indices and Stylistic Shifts

Three /r/-fullness indices were calculated for each participant: the Auditory Analysis Word List /r/-fullness index (AAWL), based on the Word List task tokens, Auditory Analysis Free Speech /r/-fullness index (AAFS), for the Free Speech tokens, and Auditory Analysis Total /r/-fullness index (AATotal), based on tokens elicited during both tasks. AAWL and AAFS indices were then compared in order to answer the research questions regarding the existence and the direction of stylistic shifts in the speech of Polish L2 English users living in England (RQs 1, 4, 4a).

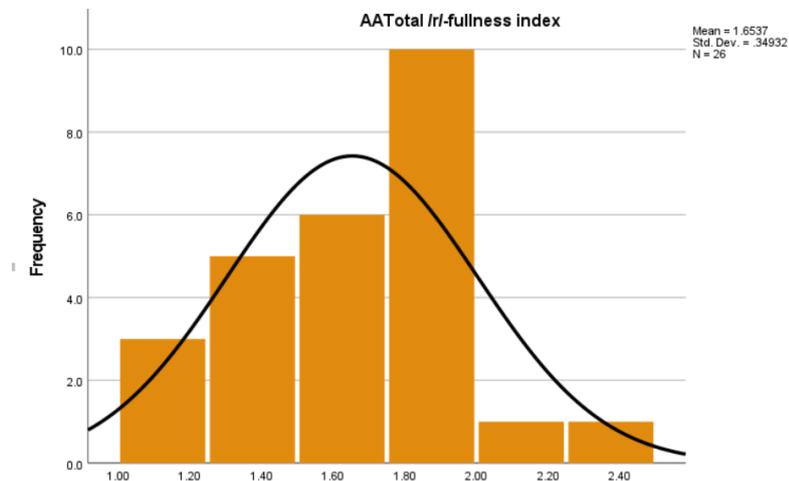
4.2.1 AATotal /r/-fullness Index

For Total /r/-fullness index was calculated based on the values (1-4) assigned to the various /r/ variants (see section 3.6.1.4.1) employed by the participants. The mean value was 1.65, with standard deviation $\sigma=0.34$. The values ranged between 1.02 and 2.41. Three participants, P20JL, P24WP and P07ZA, displayed values lower than 1.05, which denoted almost exclusively non-rhotic realisations (category one tokens); five participants displayed values between 1.3 and 1.54, indicating higher variability in terms of /r/ realisations, but with approximately half or more tokens still falling into the “non-rhotic” category (category one). For six further participants, the values ranged from 1.57 to 1.71, while for ten other participants the values fell between 1.77 and 1.99, indicating a higher ratio of “more /r/-ful” realisations. The latter range was the most common in the data set and is represented by the spike on the histogram below. Interestingly, only two of the participants displayed values

higher than 2.0, placing them on the other end of the /r/-fullness spectrum, indicating at least some use of variants characteristic of Polish (categories three or four).

Figure 12

Total /r/-Fullness Index Presented on a Histogram



The exact values for Total /r/-fullness index for each participant are presented in Table 11.

Table 11

Total /r/-Fullness Index Based on all the Tokens, Arranged From the Lowest to the Highest Value

Participant	AATotal /r/-fullness index
20 JL	1.02
24 WP	1.02
07 ZA	1.04
18 SB	1.3
08 KA	1.32
26 NM	1.34
25 SM	1.35
03 GM	1.5
09 BM1	1.54
23 GD	1.57
17 SP	1.62
10 KS	1.66
14 JM	1.67
12 NT	1.71
13 NE	1.77
02 PD	1.79
11 BM2	1.84
05 ZH	1.87
06 MP	1.87
16 MK	1.88

21 KP	1.89
15 RK	1.91
04 BK	1.93
01 PA	1.99
19 MI	2.2
22 SJ	2.41

4.2.2 Word List and Free Speech /r/-fullness Indices

For AAWL /r/-fullness index, the mean value was 1.70, which was 0.05 higher than for the AATotal index. Standard deviation (σ) was 0.37, which was 0.03 lower than for AATotal. The index values ranged between 1.02 and 2.51, with the later value being 0.1 higher than in AAWLTotal, which demonstrates a somewhat wider data spread in AAWL than in AAFS. The AAFS /r/-fullness index had a mean of 1.48, which was 0.1697 lower than AATotal. Standard deviation was 0.29, i.e. 0.05 lower than for the AATotal index.

Table 12

AAWL /r/-Fullness and AAFS /r/-Fullness Index Values for Individual Participants; Arranged From Lowest to Highest.

Participant	AAWL /r/-fullness index	Participant	AAFS /r/-fullness index
20 JL	1.02	24 WP	1
24 WP	1.02	07 ZA	1.02
07 ZA	1.04	20 JL	1.04
08 KA	1.28	18 SB	1.13
25 SM	1.33	10 KS	1.2
18 SB	1.35	09 BM1	1.28
26 NM	1.35	13 NE	1.3
03 GM	1.55	26 NM	1.33
09 BM1	1.59	03 GM	1.37
23 GD	1.59	17 SP	1.37
17 SP	1.66	06 MP	1.38
14 JM	1.71	25 SM	1.39
12 NT	1.72	04 BK	1.42
10 KS	1.84	08 KA	1.46
02 PD	1.86	23 GD	1.5
05 ZH	1.86	14 JM	1.57
11 BM2	1.91	02 PD	1.6
21 KP	1.91	11 BM2	1.6
13 NE	1.93	16 MK	1.62
16 MK	1.95	12 NT	1.67
15 RK	1.98	15 RK	1.72
06 MP	2.01	21 KP	1.8
01 PA	2.02	05 ZH	1.89

04 BK	2.09	22 SJ	1.89
19 MI	2.21	01 PA	1.9
22 SJ	2.51	19 MI	2.15

The speech data obtained clearly confirm that L2 English of Polish speakers is characterised by variable rhoticity, albeit, in line with Waniek-Klimczak and Matysiak (2016) some speakers tend to be significantly more variable than others (RQ1).

4.2.3 Style Shifts

Comparing the two indices, AAWL mean was 0.22 higher than AAFS mean, with standard deviation 0.08 higher than for AAFS. This indicated that the Word List data set comprised a higher proportion of /r/-ful realisations than Free Speech data.

Table 13

A Comparison of the Word List and Free Speech /r/-Fullness Indices

		Paired Samples Statistics			
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	AAWL /r/-fullness index	1.7042	26	.37853	.07424
	AAFS /r/-fullness index	1.4840	26	.29662	.05817

In order to establish whether there was a statistically significant difference between the two indices, the means were compared using SPSS. Since both variables had normal distribution, a parametric test was appropriate; hence, the Paired-Samples T Test was employed, the result of which are presented in Table 14.

Table 14

The Results of the Paired-Samples T Test for AAWL and AAFS

		Paired Samples Test							
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	AAWL /r/-fullness index - AAFS /r/-fullness index	.22017	.24503	.04805	.12120	.31914	4.582	25	<.001

Note. The Results of the Paired-Samples T Test demonstrate a difference between the two /r/-fullness indices significant at the p<0.01 level.

The results demonstrate that there is a clear difference between AAWL and AAFS /r/-fullness indices, with the t-score of 4.58 and significance of $p < 0.001$. This result is consistent with the findings of the variationist approach to sociolinguistic research, reflecting what Labov (1972) called stylistic shifts: speakers tend to vary the use of a linguistic variable across the different parts of a sociolinguistic interview, which typically start with an informal conversation followed by more formal language tasks that require more attention to language on part of the participant. According to Labov (2004), when participants focus on the narrative rather than language, they tend to revert to the casual style of speech they typically use with their family, which typically results in lower ratios of the more “prestigious” or “correct” variants. However, in this case the direction of the shift appears to be different, as many participants seem to perceive the more /r/-ful variants as less prestigious (see section 4.6.3); which poses the question whether the more /r/-ful performance on the Word List task can indeed be interpreted as an attempt to sound more “prestigious” or “correct”.

4.2.4 The Direction Of Style Shifts

A simple explanation could be that this style shift is indeed the result of increased attention to speech and is still governed by the idea of “correctness” as transferred from Polish. As Szpyra-Kozłowska (2018) suggests, non-rhotic, “/r/-less” pronunciation of words may seem “morphologically incomplete” or “incorrect” to native speakers of Polish. She argues that this is due to the fact that Polish stems tend to end in a consonant (Szpyra-Kozłowska, 2018). In addition, as discussed in her study of English borrowings in Polish, retaining the final /r/ is “morphologically justified” in Polish as, without this final segment, it is not possible to decline masculine nouns, such as “Manchester” or “corner” (Szpyra-Kozłowska, 2018). As a result, many Polish users of L2 English try to “improve” or “fix” the phonological structure of English words by retaining the word-final postvocalic /r/ (Szpyra-Kozłowska, 2018). Therefore, it could be argued that, at least for some lower-level participants, the more /r/-ful performance on the Word List task was indeed a function of attention to language and the desire to be accurate.

Another potential factor that could account for style shifts is the influence of spelling. According to Brown (1988), foreign learners of English are reported to be particularly susceptible the impact of spelling; it also seems likely that L2 English users presented with a list of words to pronounce tend to rely on spelling more than when they speak freely. The salience of orthography in L2 English speech of Polish speakers is also highlighted by

Szpyra-Kozłowska (2018), who points out that it is due to orthography that the “rhoticity” of Polish is often transferred to English, resulting in /r/-ful realisations.

In addition, this impact of orthography may have been either reinforced or reduced by word familiarity: it seemed that when participants were not familiar or less familiar with a lexical item they were supposed to read out loud, they tended to follow the spelling pronunciation more closely, and thus produce rhotic variants, which suggested the existence of a link between /r/-ful pronunciation and word familiarity. Although, for practical reasons, it was not possible to establish the participants’ familiarity with the lexical items used as stimuli in this study, the independent variable of word frequency was included in the model instead. This was based on the premise that the more frequent a lexical item is, the greater the probability that the participants would be familiar with it. Indeed, multiple regression analysis results show a negative correlation between lexical frequency and the ratio of /r/-ful pronunciations of that lexical item in the Word List data set, with $p=0.003$ and standardised Beta coefficient of -1.99. This indicates that lower frequency words tend to induce more /r/-ful pronunciation, and vice versa.

As discussed above, the statistically significant difference between the means of AAWL and AAFS shows that the direction of style shifts is from the more /r/-ful performance on the Word List task to the less /r/-full pronunciation on the Free Speech task. However, when individual participant /r/-fullness scores are compared, it can be seen that not all the participants style-shift in the same direction, with four out of 26 participants (P20JL, P25SM, P08KA, P05ZH) displaying the opposite pattern, which can be observed in Table 15 (the four divergent participants have been underlined).

Table 15

Individual Values for AAWL and AAFS /r/-Fullness Indices

Participant	AAWL /r/-fullness index	AAFS /r/- fullness index
24 WP	1.02	1
07 ZA	1.04	1.02
<u>20 JL</u>	<u>1.02</u>	<u>1.04</u>
18 SB	1.35	1.13
10 KS	1.84	1.2
09 BM1	1.59	1.28
13 NE	1.93	1.3

26 NM	1.35	1.33
03 GM	1.55	1.37
17 SP	1.66	1.37
06 MP	2.01	1.38
<u>25 SM</u>	<u>1.33</u>	<u>1.39</u>
04 BK	2.09	1.42
<u>08 KA</u>	<u>1.28</u>	<u>1.46</u>
23 GD	1.59	1.5
14 JM	1.71	1.57
02 PD	1.86	1.6
11 BM2	1.91	1.6
16 MK	1.95	1.62
12 NT	1.72	1.67
15 RK	1.98	1.72
21 KP	1.91	1.8
<u>05 ZH</u>	<u>1.86</u>	<u>1.89</u>
22 SJ	2.51	1.89
01 PA	2.02	1.9
19 MI	2.21	2.15

Note. The comparison of individual values shows that 24 out of 26 participants style-shift in the same direction, with four participants displaying a different pattern (underlined).

While it is not possible to determine the exact reason why those four participants diverged from the dominant pattern of style shifts, it is worth pointing out that all those four “divergent” participants had relatively high ILETS Lexical Resource scores as well as mean IELTS scores (not including pronunciation). The former ranged from 7.5 to 8.0, which was higher than 38% of participants, while the latter was at least 7.33, i.e. higher than 46% of people in the sample.

Table 16

Participant Mean IELTS Scores (not Including Pronunciation)

Participant	IELTS LoE w/o Pron
22 SJ	5.67
04 BK	6.5
11 BM2	6.5
12 NT	6.67
01 PA	6.83
06 MP	6.83
09 BM1	6.83
15 RK	6.83
17 SP	6.83

24 WP	6.83
13 NE	7.17
19 MI	7.17
03 GM	7.33
<u>05 ZH</u>	<u>7.33</u>
10 KS	7.33
<u>20 JL</u>	<u>7.33</u>
23 GD	7.33
16 MK	7.5
18 SB	7.5
21 KP	7.5
26 NM	7.5
<u>08 KA</u>	<u>7.83</u>
02 PD	8.0
<u>25 SM</u>	<u>8.0</u>
14 JM	8.5
07 ZA	9.0

Note. Participant Mean IELTS Scores (not Including Pronunciation) arranged from lowest to highest; participant scores which diverged in terms of the direction of style shifts have been underlined.

Therefore, it could perhaps be hypothesised that, at least in the case of some Polish L2 English users, a more extensive lexical knowledge as well as a higher level of English allow speakers to “override” the influence of spelling during tasks which require paying more attention to language, and thus produce a higher ratio of L2-like, non-rhotic forms, and a higher ratio of “casual”, rhotic variants in conversation, i.e., when paying more attention to the narrative itself. Those L2 English speakers follow the same direction of style-shifting as variably rhotic speakers in predominantly non - rhotic areas, e.g. the south of England, where rhotic forms are typically regarded as less prestigious (Foulkes et al., 2010).

4.2.5 Section Summary

This section has presented some evidence for the presence of style-shifting in the speech of Polish L2 English users living in the south of England, as demonstrated by the statistically significant difference between the Word List and Free Speech /r/-fullness indices. While style shifts do occur, for the majority of speakers in the sample, their direction does not seem to be governed by the attempt to produce the more prestigious /r/-less forms, but rather by the peculiar notion of “correctness” transferred from Polish, as well as by the influence of spelling, mediated by their knowledge of English lexis and the overall frequency of English lexical items.

However, it is important to acknowledge that the results presented should be approached as somewhat preliminary. This is largely due to the fact that the style comparison conducted did not take into account internal constraints. More specifically, while contracted forms and function words frequently occurred in the Free Speech data set, for reasons discussed in section 3.5.4.2, they were not a part of the Word List data, with a few exceptions only. Thus, it is likely that these internal constraints at least partially account for the differences between /r/-fullness index values observed for the two styles. It is therefore recommended that future studies investigating style shifts take both speech rate and word class into account in order to fully explore the issue.

4.3 Phonetic Variability in /r/ Realisations

One of the main goals of this study was to establish whether Polish speakers of L2 English living in the south of England were consistently non-rhotic, consistently rhotic or variable in terms of /r/ realisations (RQs 1 and 3). The study also aimed to identify the dominant variants in their speech (RQ 3d).

4.3.1 The Usage of Categories in AATotal Data Set

The following categories were employed in the study, as presented in Table 17:

Table 17
Categories Employed in the Current Study for Coding Language Data

L2 (English)			L1 (Polish)	
L2-like distribution L2-like variants	L1-like distribution L2-like variants	L1-like distribution L1-like variants		other
non-rhotic	rhotic			
/r/=∅	offglides, r-coloured vowels, approximants	taps and "missed" taps	trills, trilled fricatives	
1	2	3	4	5

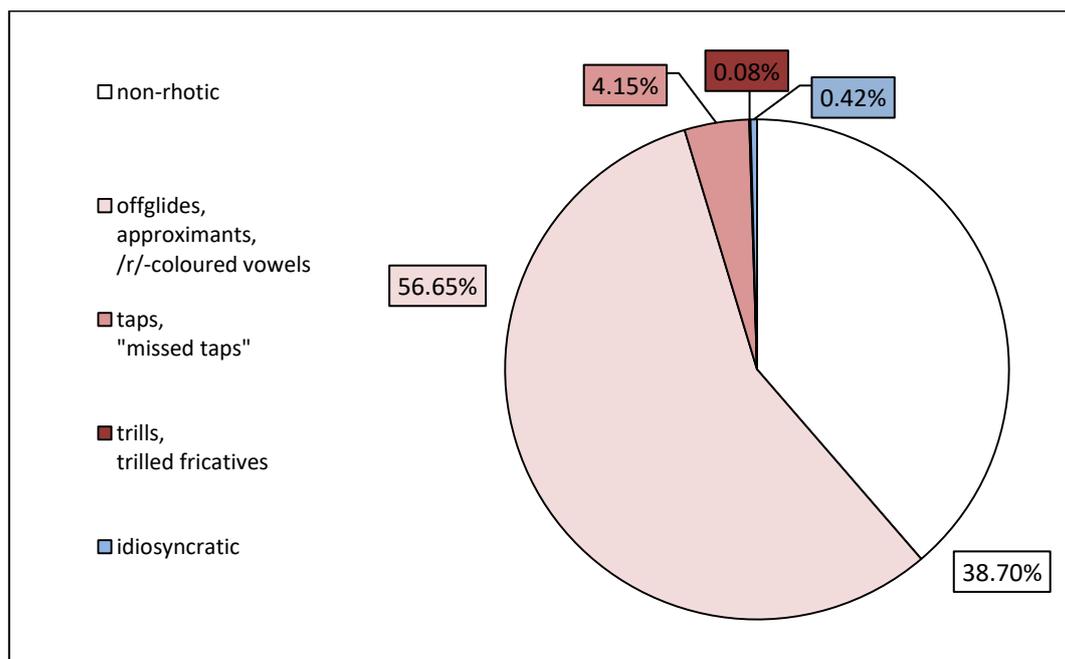
As demonstrated by AATotal /r/-fullness index, participants differed from one another in terms of /r/-fullness, with scores ranging from 1.02 to 2.41, the mean value of 1.6537 and standard deviation $\sigma=0.34932$. While AATotal /r/-fullness index scores show that all the participants displayed some degree of variability, as no score was an integer of 1.0, 2.0, 3.0 or 4.0. This means that each participant used at least two variants to pronounce non-prevocalic /r/; however, some participants showed more variability than others. As discussed above, three participants scored lower than 1.05, which puts them very close to the non-rhotic end of the /r/-fullness continuum, with very little variability indeed. On the other hand, two of the

participants scored higher than 2.0, which places them on the other end of the /r/-fullness spectrum, indicating some use of variants belonging to categories 3-4, while still retaining high degrees of variability. While analysing AA /r/-fullness index scores provides clear evidence for variability, in order to determine which variants were used and to what degree (RQs 3 and 3d), speech data tokens need to be analysed.

6,955 tokens, i.e. words with non-prevocalic /r/ were analysed in total; the data set comprised 5,361 Word List tokens and 1,594 Free Speech tokens, which were assigned to one of the five categories presented above. In order to establish the dominant variant for the whole cohort, percentages were calculated; these are presented in Figure 13:

Figure 13

Percentage of Tokens in Each Category in the Data Set



Note. Percentage of tokens within each category (1-5) in the AATotal data set.

As illustrated in the chart above, the most frequent category in the data set was category two, “off-glides, r-coloured vowels and approximants”, constituting about 57% of the data set. The category comprised a relatively wide range of variants, ranging from diphthongised steady state vowels, for example “core” realised with a distinctive offglide, as in [ˈkʰɔːə] rather than [ˈkʰɔː]; /r/-coloured vowels, as in “nurse” realised as [ˈnɜːs]; as well as approximants characteristic of or resembling those associated with standard “native” accents of English

such as GB or GA. In relation to the non-rhotic varieties of British English which the participants would be exposed to in varying degrees in their daily interactions, tokens which fell into this category followed the participants' L1 phonological pattern for /r/ distribution, i.e. the “rhoticity” of Polish, but the quality of the allophones employed was typical of or resembling that of L2 prevocalic /r/ variants.

The second most frequent category was category one, i.e., non-rhotic realisations. The category accounted for 38.7% of data. Tokens which were assigned to this category followed the participants' L2 both in terms the /r/ distribution pattern as well as the quality, in the sense that no constrictive /r/ was articulated following the vowel. As stated in the Methodology chapter, the exact vowel quality was not relevant for the purpose of this part of analysis, so tokens where vowel quality was significantly altered were also included, as long as monophthongs were not diphthongised by adding an offglide, in which case such tokens would be classified as belonging to category one.

The third category was category three, which comprised Polish-like taps and lenited taps; it accounted for 4.15% of data, which is significantly less than the two categories discussed above. The tokens assigned to this category were consistent with the participants' L1 both in terms of distribution and segment quality, or at least deemed “closer” to Polish variants than to English ones, as in the case of the “intermediate” variants, with duration shorter than in English and no F3 lowering typical of English approximants (see section 3.6.1.4.2).

The second smallest category was category number five, labelled as “idiosyncratic”; it comprised 0.42% of data. The allophones in this category could not be interpreted as a direct result of linguistic transfer from Polish; neither were they considered to be standard or even common in non-pathological speech in English; rather, the category comprised various idiosyncratic “strategies” that participants employed to pronounce non-prevocalic /r/. Some of those strategies seemed random, e.g., merely the result of an articulatory failure, such as producing a single instance of /l/ instead of /r/. However, some of those variants seemed less random; one example of such strategy would be the use, albeit not always consistent, of a velar approximant for words with the /ɑ:/ vowel, e.g. [ˈbɑʊɪbə] (“barber”), [ˈpɑʊɪkə] (“parker”) by participant P09BM1. Another example would be employing /əʊ/-like vowels in words containing /ɔ:/, as was frequently the case for participants P20JL and P24WP, resulting in words like “roars”, “sort” pronounced as [ˈləʊd] and [ˈsəʊt] respectively. It seems that such idiosyncratic strategies for dealing with non-prevocalic /r/ may have been developed by

some participants in order to avoid producing impressionistically strong /r/-ful variants, while their semi-systemic or systemic nature suggests that they could be a part of each individual participants' interlanguage (Selinker & Gass, 2008) and are most likely the result of individual participants' L2 acquisitional trajectories.

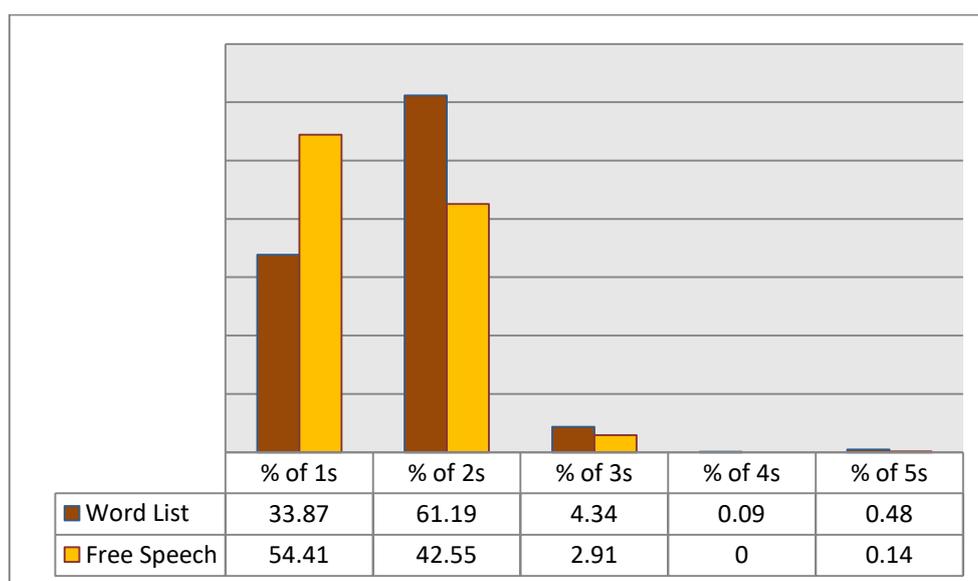
Finally, the smallest portion of tokens was assigned to category four, which comprised trills and trilled fricatives, accounting for only 0.08% of all tokens.

4.3.2 The Usage of Categories in The Word List and The Free Speech Data.

When analysing Word List and Free Speech data sets individually, it can be observed that for WL data, the hierarchy of usage is the same as in the aggregated data set, with category two-type tokens being the dominant variant, followed by category one, three, five and four; however, for FS data, the dominant variants belonged to category one, i.e. non-rhotic realisations. Moreover, no evidence of category four-type tokens was found in the FS data set, which aligns with an observation by Jaworski and Gillian (2011) that even in Polish trills have “fallen out of use” except for “emphatic speech” and “declamatory style”. Since reading out a word list certainly requires more attention to form and calls for a more deliberate, emphatic style, it is hardly surprising that the occurrence of otherwise rare category four tokens was limited to WL data. The hierarchy of other type of realisations, i.e. 3 and 5, is the same for both data sets and is presented in Figure 14 below:

Figure 14

Distribution of Tokens in the WL and FS Data Sets Respectively.



Note. A comparison of category 1-5 use in WL and FS data respectively (percentages).

4.3.3 Phonetic Variability in /r/ Realisations: Discussion

The results presented above are not entirely surprising when examined in the light of existing research on rhotics both in Polish and L2 English of Polish speakers. The low ratio of trills (category four) in particular was expected. As discussed in the Literature Review chapter, contrary to the popular belief propagated by many Polish textbooks (Ostaszewska & Tambor, 2000; Strutyński, 2006) and some speech therapy literature (Budkowska, 2014-2015; Lipiec & Więcek-Poborczyk, 2018), fully articulated trills are relatively rare in Polish. Several studies examining the quality of the Polish rhotic have reported very low ratios of trills. For example, several studies by Stolarski (2013a, 2013b, 2015), which investigated the quality of the Polish rhotic, found that trills only accounted for 3%, 1.44-1.48%, 9% and 10% of tokens, in the intervocalic, post-consonantal, pre-consonantal and word-final position respectively, with the tap being the dominant variant in all the four contexts examined. Similarly, Jaworski's (2010) study of the Polish /r/ in the intervocalic position identified only 1.3% of tokens as trills, with the majority of 59.5% of tokens realised as taps. Interestingly, in a subsequent study of intervocalic /r/ by Jaworski and Gillian (2011), no trills were identified; this however may have been due to the limited number of informants, which comprised only eight female participants. However, this result fits in with a more recent study by Zając and Rojczyk (2017a, 2017b), which examined /r/ realisations of 26 native speakers of Polish, finding no evidence of trills, and again, identifying the tap as the most frequent allophone of /r/ in Polish. On the basis of these results one can agree with Stolarski (2013a, 2013b, 2015), who convincingly argues that although trills are one of the possible /r/ allophones in Polish, particularly for post-vocalic /r/ in the pre-consonantal and word-final positions, they are rare in non-emphatic speech. Although when specifically requested to produce a Polish /r/, native speakers of standard Polish with no speech impediments will nearly always produce a trill (Jaworski, 2010), it seems that while for Poles the status of the trill may still be that of a mental representation of the Polish rhotic, it hardly ever is the actual phonetic reality. Therefore, it was to be expected that the ratio of trills in Polish-accented English will be even lower than in the speakers' L1, which is exactly what the results demonstrate.

Compared to existing research on rhotics in Polish-accented English, Zając (2016) reported that in her research on the L2 speech of Polish learners of English living in Poland, alveolar trills were "extremely rare", which the results of this study seem to confirm. A study on the quality of prevocalic /r/ in English by Zając and Rojczyk (2017a, 2017b) found no evidence of trills and concluded that the most frequently occurring realisation of /r/ was in fact an

approximant, accounting for 98% of all the tokens, with taps accounting only for 0.3% of data. Since Zajac and Rojczyk (2017a, 2017b) did not focus specifically on non-prevocalic /r/, it is not possible to directly compare the results with the findings of the current study; however, both identify approximants as the overall dominant realisation for /r/ in Polish accented English.

Perhaps one unexpected result is that the ratio of trills, i.e. tokens in category four, is lower than that of idiosyncratic variants in category five: 0.08% versus 0.42% respectively. This could be due to the fact that many participants seemed to attach largely negative indexical value to L1-like /r/ variants in Polish-accented English (see Results and Discussion, section 4.6.5), which is why it is possible they may have made a deliberate effort to avoid them; at the same time, some speakers may have lacked the linguistic resources necessary to accurately produce English-like variants, resulting in an increased number of idiosyncratic realisations that did not clearly resemble either L2 or L1 variants.

4.3.4 Impressionistically “Weak” Rhoticity

Based on the studies investigating rhoticity in L2 English of Polish speakers (Szpyra-Kozłowska, 2018; Zajac, 2016; Zajac & Rojczyk, 2017a, 2017b), it was expected that approximants would be one of the two dominant realisations, or even the dominant one, as AATotal results have demonstrated. Nevertheless, it is necessary to point out that this study employed relatively broad phonetic categories, which was in order to account for the limitations of auditory and acoustic analysis, as well as to ensure both intra-rater and inter-rater consistency. As a result, category two does not discriminate between all the different types of approximant realisations, comprising several types of approximants as well as offglides. It was beyond the remit of the study to focus on fine-grained phonetic details, nor was it possible to determine exact articulatory configurations employed by the participants with the research instruments employed, i.e. auditory analysis and inspection of spectrograms. Thus, the nature of the following observations is rather impressionistic, as it is based on the researcher’s comments about each participant’s performance on the Word List and Free Speech tasks written down during and completed after auditory analysis, not precise phonetic measurements of each individual token. Nevertheless, a pattern has emerged which needs to be highlighted, even if only for purposes of further investigation.

Out of the 26 participants, 13 participants (P01PA, P02DP, P034BK, P06MP, P08KA, P09BM1, P12NT, P15RK, P18SB, P21K, P23GD, P25SM, P26NM) were identified as using

a significant proportion of impressionistically weakly rhotic realisations, as contrasted for example with PP13NE and PP14JM, who produced fairly impressionistically consistent approximant realisations, with less variability within the category. In other words, the quality of the majority of category two tokens produced by the former group of participants seemed weak, meaning that some of those tokens could not be instantly recognised as rhotic (i.e. not upon the first listen), or, at least in some cases, could only be unambiguously verified as rhotic through spectrographic analysis, where evidence of formant movement indicated movement of articulators to form a constriction. It is speculated that this impressionistic effect of “weak” rhoticity may have been due to those variants lacking one of the constrictions characteristic of many variants of English /r/ (see section 2.2.2.3.2) or due to the relatively small lingual gesture involved in the production of the approximant. From the sociophonetic perspective, since most of the participants seemed to attach more prestige to less /r/-ful realisations, it may be the case that Poles living in the south of England learn to modify their speech to index their “belonging” or status as a linguistically competent English user not just through a binary “switch” from rhotic to non-rhotic variants, which may not be possible for a number of reasons, the classic one being fossilization (Selinker & Gass, 2008) but, perhaps through producing “intermediate”, impressionistically weaker, yet still rhotic, variants. These phonetically intermediate variants could perhaps be regarded as what literature calls “fudged” or inter-dialectal forms, which typically emerge in dialect contact situations (Britain, 2010; Harris, 1988; Kerswill, 1994), albeit in the context of this research, the two varieties in question are two very languages rather than dialects of the same language, i.e. Polish and English.

While coding speech data in this study, the researcher often felt as if participants were, either deliberately or subconsciously, trying to “suppress” the lingual gesture when producing approximants or /r/-coloured vowels, which resulted in considerable phonetic instability and more variability both between, as well as within, the categories. Investigating such a linguistic change in /r/-realisations and the variation in fine phonetic detail calls for a longitudinal study and different research instruments, such as ultrasound imaging or magnetic resonance imaging, as neither auditory nor spectrographic analysis seem adequate when minute articulatory differences are to be examined.

4.3.5 The Usage of Categories for Individual Participants

A breakdown of each individual participant's tokens presented in Table 18 allows for a comparison of individual repertoires, as demonstrated by the aggregated (AATotal) speech data (WL and FS data combined).

Table 18

Percentages of Each Category of Tokens per Individual Participant in the AATotal Data Set

Participant	% of 1s in AATotal	% of 2s in AATotal	% of 3s in AATotal	% of 4s in AATotal	% of 5s in AATotal
01 PA	8	84.73	7.27	0	0
02 PD	21.59	78.07	0.33	0	0
03 GM	50.32	49.68	0	0	0
04 BK	16.6	73.44	9.96	0	0
05 ZH	15.08	83.33	1.59	0	0
06 MP	20.91	70.72	8.37	0	0
07 ZA	96.28	3.72	0	0	0
08 KA	68.36	31.64	0	0	0
09 BM1	48.62	47.43	2.77	0	1.19
10 KS	34.63	63.6	0.71	0	1.06
11 BM2	15.81	83	0.4	0	0.79
12 NT	29.29	70	0.36	0	0.36
13 NE	24.9	72.37	1.95	0	0.78
14 JM	32.99	67.01	0	0	0
15 RK	10.91	87.27	1.45	0	0.36
16 MK	13.06	86.19	0.75	0	0
17 SP	40.66	56.43	2.49	0	0.41
18 SB	69.53	30.47	0	0	0
19 MI	7.55	65.66	26.42	0.38	0
20 JL	97.75	2.25	0	0	0
21 KP	11.02	88.58	0	0	0.39
22 SJ	3.9	52.38	41.56	1.73	0.43
23 GD	43.46	56.18	0.35	0	0
24 WP	93.56	1.72	0	0	4.72
25 SM	64.9	35.1	0	0	0
26 NM	66.55	32	1.09	0	0.36

Only two participants out of the whole cohort, P22SJ and P19MI, employed any category four variants, i.e. trills/trilled fricatives; these accounted for 1.73% and 0.38% of their tokens respectively. Incidentally, those two participants who employed category four variants also produced the highest percentage of category three tokens out of the 26 speakers, 41.56% and

26.42% respectively. They also had the lowest percentage of non-rhotic variants, which places them firmly on the L1-like end of the /r/-fullness continuum. Nevertheless, even for these two strongly Polish-accented speakers the overall dominant variant (i.e. one that they produced the most frequently in the AATotal data set, which comprises all WL and FS tokens) was still category two, i.e. offglides, /r/-coloured vowels and approximants.

Category three tokens (taps and lenited taps) were employed by 17 out of the 26 participants: P22SJ, P19MI, P04BK, P06MP, P01PA, P09BM1, P17SP, P13NE, P05ZH, P15RK, P26NM, P16MK, P10KS, P11BM2, P12NT, P23GD and P02PD. Percentage scores ranged from 4.56% to 0.33%. For 15 of those participants, the dominant variant was still category two, while for the other two speakers, P26NM and P09BM1, the dominant variant was category one, i.e. non-rhotic realisations.

Category two tokens were dominant for the majority of speakers, i.e., 17 participants out of 26. Out of these 17 speakers, only 2 did not employ any category three tokens. For the nine speakers who employed non-rhotic realisations as the dominant variant, only two (P26NM and P09BM1) made use of category three realisations, while the other seven used almost exclusively categories one (non-rhotic) two (approximants, offglides, /r/-coloured vowels) alongside some category five variants (idiosyncratic realisations).

These results demonstrate that the use of category four (trills) was marginal, and that category four variants were only used by those speakers who had the highest rates of category three tokens (taps). In other words, the participants who did not employ any category three tokens did not use any category four tokens either. This connection between having both trills and a high number of taps in one's phonetic repertoire could be explained by the phonetic instability of the trill; for those participants who do transfer their mental representation of the Polish rhotic into their L2 English speech, the articulatory challenge involved in producing a trill (see section 2.2.2.1) results in lenited variants, i.e. taps and various "articulatory undershoot" of taps (Jaworski & Gillian, 2011).

While category three realisations (taps/lenited taps) were used by a majority of the speakers, only one participant (P22SJ) used the variant as their main /r/ realisation in the WL data (but not on the FS task), while another (P19MI) used mostly taps/tap like variants in the FS data (but not on the WL task). Incidentally, P22SJ and P19MI were the only ones who produced any category four tokens (trills/trilled fricatives). Nonetheless, no participants employed taps or tap-like variants as their dominant non-prevocalic /r/ realisation in the AATotal data.

The two dominant variants were categories one and two, for nine and 17 speakers respectively. Interestingly, the majority of participants who produced mainly category one tokens, i.e. seven out of nine, did not employ any category three realisations, while the majority of participants who produced mainly type two variants, i.e. 15 out of 17, did use category three variants in their repertoire. Spearman's rho correlation coefficients were determined for categories one, two, three and four; these are presented in Table 19.

Table 19
Spearman's Rho Correlation Coefficients for Categories 1-4 in the AATotal Data Set.

Correlations						
		AATotal.1	AATotal.2	AATotal.3	AATotal.4	
Spearman's rho	AATotal.1	Correlation Coefficient	1.000	-.766**	-.663**	-.462**
		Sig. (1-tailed)		0.000	0.000	0.009
		N	26	26	26	26
AATotal.2	AATotal.1	Correlation Coefficient	-.766**	1.000	0.316	-0.099
		Sig. (1-tailed)	0.000		0.058	0.315
		N	26	26	26	26
AATotal.3	AATotal.1	Correlation Coefficient	-.663**	0.316	1.000	<u>.473**</u>
		Sig. (1-tailed)	0.000	0.058		<u>0.007</u>
		N	26	26	26	<u>26</u>
AATotal.4	AATotal.1	Correlation Coefficient	-.462**	-0.099	.473**	1.000
		Sig. (1-tailed)	0.009	0.315	0.007	
		N	26	26	26	26

Note. **. Correlation is significant at the 0.01 level (1-tailed).

As expected, highly significant negative correlation exists between the number of tokens in categories one and two (-0.766**, p=0.000), which simply indicates that the more frequently category one realisations are employed, the less frequent category two tokens are, and vice versa. What is more interesting is that there is a statistically significant positive correlation between the number of tokens in categories three and four (0.473**, p=0.007). There are also strong negative correlations between the number of tokens in category one and categories three (-0.663**, p=0.000) and four (-0.462**, p=0.009). Based on these findings, the following patterns of use for non-prevocalic /r/-variants can be suggested:

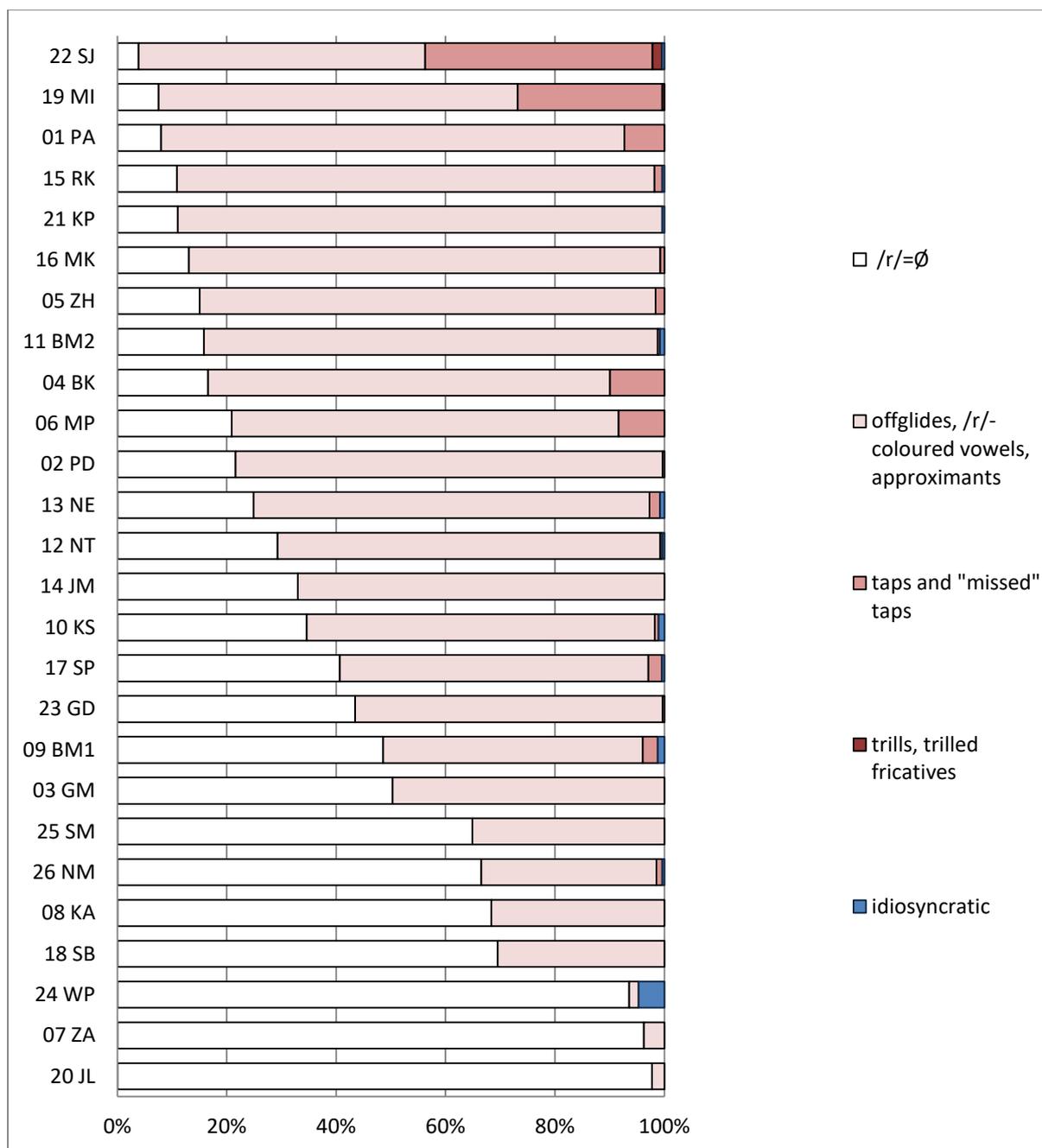
- The more Polish speakers of L2 English use non-rhotic (category one) variants, the less they are likely to employ any taps and tap-like variants (category three);
- The more Polish speakers of L2 English use non-rhotic (category one) variants, the less they are likely to employ trills and trilled fricatives (category four);

- The more Polish speakers of L2 English use trills and trilled fricatives (category four variants), the more likely they are to produce taps and tap-like variants (category 3).

Although the comparison of the number of tokens in each category for individual participants suggests that those participants who use approximants (category two variants) as their main non-prevocalic /r/ variant tend to employ at least some taps and tap-like variants (category three), statistical analysis has not confirmed this finding, bordering on the threshold of significance ($p=0.058$), which is why a further investigation of this relationship on a much larger sample of Polish L2 English speakers is recommended. Figure 15 provides a visual representation of all the categories comprising each participant's repertoire:

Figure 15

Percentage of Tokens in Each Category for Individual Participants (AATotal)



4.3.6 Section Summary

This section has attempted to answer research questions regarding the usage of the various non-prevocalic /r/ realisations and most frequently employed variant in the speech of Polish speakers of L2 English living in the south of England (RQs 3 and 3d). The results indeed finds further evidence for the high levels of variability in non-prevocalic /r/ realisations in the speech of Polish migrants in the UK previously suggested by Waniek-Klimczak and Matysiak (2016). While some speakers in this study are more consistent than others in terms

of their linguistic choices, no single speaker was fully consistent even within the relatively broad categories employed in this study. Even though evidence for tokens belonging to all the pre-determined categories has been found, in line with existing evidence from previous research (Szpyra-Kozłowska, 2018; Zając & Rojczyk, 2017a, 2017b), the results show that the use of trills in Polish-accented English is, indeed, minimal.

The results demonstrate that overall, the two most frequently employed non-prevocalic realisations are category one (non-rhotic) and type-two tokens (approximants, offglides, /r/-coloured vowels), with the former being dominant in free speech, while the latter being more frequent both in Word List data as well as overall.

Some evidence for highly idiosyncratic strategies for non-prevocalic /r/ articulation, i.e. category five tokens, has also been found; interestingly, the frequency of these is higher than of type-three tokens, which perhaps warrants further investigation of these idiosyncratic realisations using suitable research tools enabling the examination of articulatory details such as e.g. ultrasound imaging.

The following sections will examine various acquisitional, social, as well as attitudinal factors that potentially influence the participants' articulatory choices presented above.

4.4 Acquisitional, Attitudinal and Social Constraints on Non-prevocalic /r/ Realisations

The current study examines variation in the phonetic performance of adult Polish users of L2 English who are currently residing in the UK. It presents a synchronic “snapshot” of the participants' phonetic performance rather than a longitudinal study of second-language development. Yet, because the data under study concerns the participants' second language, not accounting for the potential impact of acquisitional factors at all would seem like an oversight. Therefore, this section presents the findings of the study regarding the impact of acquisitional and attitudinal (RQ 3b), as well as social factors (RQ3c) which, as the results suggest, impact the participants' rhoticity as well as their choice of /r/ variants.

4.4.1 Acquisitional Factors

4.4.1.1 Age-Related Factors and English-Language Instruction

4.4.1.1.1 Age

In accordance with the remit of the study, all the participants were aged 22-40 and migrated to the UK as adults, which is why the age bracket was relatively narrow. This means that age on its own was not expected to affect with the participants' performance in a meaningful way. Indeed, Spearman's rank correlation coefficient test found no statistically significant correlations between the participants' age and any of the dependent variables (see Appendix IV, Table 20).

4.4.1.1.2 Age of Onset (of Learning English)

The age at which participants started receiving L2 instruction or first came into regular contact with their second language, as well as other age-related factors, are widely reported as playing an important role in second language performance (Dörnyei, 2009b; Ellis et al., 2005; Kuhl, 2000). In this study, the Age of Onset for participants ranged from 5 five to 30 years. Twelve participants commenced learning English before puberty, i.e., the age of 12; nine started receiving instruction at the age of 12 or 13, while five could be considered late learners, having only received any formal instruction at the ages of 15 (2), 19 (2) and, in one case, at the age of thirty. After Bonferroni adjustment, the new significance threshold was $p = 0.00016$, which meant that the Spearman rho correlation coefficients showed no statistically significant correlations for the Age of Onset of learning English.

4.4.1.1.3 Formal Instruction in English in Poland

The majority of the participants, i.e., 23 out of 26, had received formal instruction in English before they moved to the UK. After Bonferroni correction, new significance level of $p = 0.01$, Student's T test for independent samples revealed no statistically significant differences between the two sub-groups of participants. However, even after the Bonferroni adjustment, $p = 0.00357$, The Mann-Whitney U test revealed statistically significant differences between the two subsets of participants in terms of the percentages of category four realisations in the Word List data set, with U value of 11.50 and $p = 0.000$, as well as AATotal data, with U value of 11.50 and $p = 0.000$. The differences between the group mean indicate that those participants who had not received formal instruction in English before migrating to the UK produced almost 100% more trills/trilled fricatives (mean rank 21.17 versus 12.50) than those

who attended English classes in their home country (see Appendix IV, Table 44). However, the number of participants with no formal instruction in English prior to migration was very small (N=3), which means that this result should at best be regarded as tentative.

4.4.1.1.4 Amount of English Language Instruction

The relationships between the amount of English language instruction and the dependent variables were also investigated. Since it was difficult to precisely quantify the amount of instruction received, the amount was operationalised as the number of years of “relatively regular classes”. While such a solution could be regarded as problematic, as it did not account for the quality or the number of classes, it was felt that it was the most viable approach, considering that many participants found it difficult to recall their learning experience in detail, as the circumstances would change over a period of time. In addition, 62% (14) of participants attended some form of organised English-language support after their arrival in England. The amount of instruction received in the UK was quantified in months rather than years, as the process was even more erratic and, in general, shorter than formal English-language instruction in the country of origin, with a mean of 14.43 months.

Fifty percent (N=13) of the participants received English language instruction before the age of 12; 88% (N=23) of participants received formal instruction in English between the ages of 13 and 19; 54% (N=14) continued English classes before migrating to the UK. After Bonferroni correction, Spearman rho test indicated no statistically significant correlations between any of the dependent variables and the amount of instruction, meaning that the while formal instruction in English in Poland itself seems to have an impact, the actual amount of formal instruction in English the participants received does not seem to play a role when it comes to the participants’ rhoticity or their /r/ variant choices. This somewhat surprising finding could perhaps be attributed to a methodological issue, i.e. the lack of precision in measuring the exact amount of instruction each participant received, as well as the fact that even if established with great precision, the measure of amount of instruction does not reflect the learner’s engagement or the quality of teaching received.

4.4.1.1.5 Section Summary and Discussion

The difference in terms of trill production between those participants who had not received formal instruction in English in Poland and those who did indicates that formal training received before the age of 19 does have an impact on the speakers’ L2 pronunciation in terms of non-prevocalic /r/ realisations.

However, after the Bonferroni correction, the Age of Onset of learning English was not found to be significant for the participants' /r/-variant choices, which is in contrast to the findings of e.g. Urponen (2004), who investigated 104 Finnish female participants who had received formal instruction in English as a foreign language prior to migrating to Canada or the U.S. and marrying native speakers of English and found that the Age of onset was one of the significant predictors of native proficiency.

The results discussed above do not seem to provide support for “the younger, the better” approach to SLA, which is commonly shared by both non-experts as well as some specialist in the field (Ellis et al., 2005; Kuhl, 2000). Nevertheless, once the English language instruction has been considered, it seems that lack of instruction before migration, i.e. typically in one's childhood or teenage years, correlates with higher production of L1-like tokens, i.e. category four-type variants.

This result could perhaps be explained in light of Dörnyei (2009b), who convincingly argues that in formal learning contexts, as opposed to naturalistic settings in which L2 is acquired rather than learned, the younger age of learners is not always necessary for successful mastering of L2. This is because older learners are able to make effective use of the resources that are available to them, which are cognitive maturity, superior literacy skills and their increased reliance on explicit rather than implicit learning (Dörnyei, 2009b). Thus, older learners can be more successful than younger ones possibly because of their ability to make better use of the limited amount of L2 input (Dörnyei, 2009b). Therefore, it could be the case that in EFL settings such as Poland, the very fact of receiving formal instruction in English in one's childhood or teenage years is more significant for their L2 pronunciation than the exact age at which this tuition was received.

4.4.1.2 Level of English

4.4.1.2.1 IELTS Scores

Scores to assess the participants' level of English scores were obtained through English-language interview recording assessment conducted by qualified and active IELTS examiners. A score was assigned for each of the three criteria employed and then an average IELTS Level of English scores were calculated. The scores ranged from 5.67, i.e. “modest/competent user ” to 9, “expert user”, with a mean of 7.26 and standard deviation of 0.68. The largest subset, nine out of 26 participants, received scores in the 6.5 to 6.83 range, while only one participant scored in the below-6.0 range. All scores are presented in the table

below. In addition to those scores, the participants were also asked to self-assess their proficiency in English, as well as their level of English upon their arrival in the UK.

Table 20

Participants' Individual and Overall IELTS Scores Organised by Level

Participant	IELTS		IELTS	Average	IELTS skill level
	Fluency and Coherence	IELTS Lexical Resource	Grammatical Range & Accuracy	IELTS LoE (without Pronunciation)	
22 SJ	5.5	6	5.5	5.67	modest/competent user
04 BK	6.5	6.5	6.5	6.50	competent/good user
11 BM2	7	6.5	6	6.50	competent/good user
12 NT	7	6.5	6.5	6.67	competent/good user
01 PA	7	7.5	6	6.83	good user
06 MP	7	7	6.5	6.83	good user
09 BM1	7	7.5	6.5	6.83	good user
15 RK	7	7	6.5	6.83	good user
17 SP	7	7	6.5	6.83	good user
24 WP	7	7	6.5	6.83	good user
13 NE	7	7.5	7	7.17	good user
19 MI	7.5	7.5	6.5	7.17	good user
03 GM	7.5	7	7.5	7.33	good/very good user
05 ZH	7.5	7.5	7	7.33	good/very good user
10 KS	7.5	7	7.5	7.33	good/very good user
20 JL	7.5	7.5	7.5	7.33	good/very good user
23 GD	7	7.5	7.5	7.33	good/very good user
16 MK	8	7.5	7	7.50	good/very good user
18 SB	7.5	7.5	7.5	7.50	good/very good user
21 KP	7.5	7.5	7.5	7.50	good/very good user
26 NM	7.5	7.5	7.5	7.50	good/very good user
08 KA	7.5	8	8	7.83	very good user
02 PD	8	8.5	7.5	8.00	very good user
25 SM	8.5	8	7.5	8.00	very good user
14 JM	9	8.5	8.5	8.50	very good/expert user
07 ZA	9	9	9	9.00	expert user

After Bonferroni correction, with $p = 0.00016$, only IELTS Grammatical Range & Accuracy score was identified as significantly correlated with a two dependent variables (Table 21).

Table 21

Statistically Significant Pearson's Correlation Coefficients for the Dependent Variable IELTS Grammatical Range & Accuracy

IELTS Grammatical Range & Accuracy Average	% of 3s in AAWL	% of 3s in AATotal
Correlation Coefficient	-.707**	-.745**
Sig. (2-tailed)	0.000	0.000

4.4.1.2.2 *Self-estimated Level of English*

The participants were asked to estimate their level of English upon their arrival in the UK and at the moment of the interview. For the former, the values ranged from one (“No English at all”) to seven (“Very fluent, no communication problems”), with a mean of 3.77 and standard deviation of 1.68. For the latter, the scores ranged from three (“Basic, but enough to communicate in some situations”) to seven, with a mean of 5.65 and standard deviation of 1.41, meaning that overall the participants felt like they had progressed in terms of their L2 proficiency since they migrated to England, and so no answers from the first two points of the scale were provided, resulting in a smaller spread of data.

After Bonferroni adjustment, $p = 0.00043$, statistically significant correlations were found for Self-estimated Level of English upon Arrival only in relation to the percentage of category three tokens, i.e. taps, in the WL data (-0.656^{**} , $p = 0.031$). This dependent variable has also been identified as correlated with IELTS Grammatical Range & Accuracy.

Self Estimated Current Level of English was found to be significantly correlated only with the percentage of mispronounced tokens in the WL data (-0.649^{**} , $p = 0.000$).

4.4.1.2.3 *Section Summary and Discussion*

Those participants who had a more extensive knowledge of L2 grammar (IELTS Grammatical Range & Accuracy) produced fewer L1-like taps. The most obvious explanation would be that those participants who had higher proficiency in English were familiar both with the written as well as the spoken form of the words in the Word List; however, were this explanation true, one would also expect a statistically significant correlation with their overall proficiency in English (IELTS LoE w/o Pron), which after Bonferroni, was not the case. It is likely that a higher proficiency in English grammar was somehow related to better command

over the phonetic variants characteristic of that accent, thus allowing the participants to “override” the influence of spelling and avoid phonetic transfer from their L1.

Regardless of whether the participants’ proficiency in English was evaluated by IELTS examiners (IELTS Grammatical Range & Accuracy) or self-assessed (Estimated LoE upon Arrival), lower proficiency levels were found to correlate with higher ratios of L1-like rhotic forms such as taps and tap-like, i.e. Polish-like realisations. These results are consistent with Waniek-Klimczak and Matysiak (2016), who found that the proportion of non-rhotic realisations increased in learners with higher proficiency level in English upon arrival. These findings also seem to confirm the intuitive assumption that higher phonetic and phonological accuracy is indeed linked to higher L2 grammatical proficiency.

One issue that is problematic and cannot be fully resolved here is related to cause, effect and bias. Although all three IELTS examiners who rated the participants’ Level of English were asked not to include “pronunciation” in their scores, but instead focus on the other three criteria, it is still possible that their judgements may have been influenced by the degree of speakers’ foreign accentedness, resulting in somewhat conflated criteria. Therefore, it is not possible to determine with absolute certainty whether at least some of the correlations identified for IELTS Grammatical Range & Accuracy and the use of L1-like variants exist because the very use of those variants might have had influenced the raters’ judgements, or simply because they are a reflection of the pattern that higher grammatical accuracy tends to be accompanied by higher phonetic and phonological accuracy. Similarly, for self-evaluation, it is possible that participants’ own perceptions of their English accents may have had an impact on their estimation of their overall proficiency in that language, thus potentially influencing the results.

4.4.1.3 Exposure to English

Information on participants’ exposure to English was collected in a number of ways and was represented by a number of variables, such as Estimated English Use, Education in the target country and Length of Residence (LoR).

4.4.1.3.1 Estimated English Use

In the Questionnaire the participants were asked to self-estimate their overall use of English both with other people and to self, and were then requested to estimate their L2 use in a number of domains related to media use, which were song lyrics, news, entertainment and

social media. Self-Estimated Overall English Use was reported on a scale one to five, while the other estimates were reported in percentages.

For Estimated Overall English Use, the options were “100% Polish, 0% English”, “75% Polish, 25% English”, “50% Polish, 50% English”, “25% Polish, 75% English” and “0% Polish, 100% English”. The participants’ answers ranged from option two, indicating the use of English in “about 25% of interactions” (N=4), to five, indicating that English was used in “about 100% of interactions” (N=1), while the remaining participants reported using English in 50% (N=10) or 75% (N=10). Mean was 3.27, with a standard deviation of 0.82.

After Bonferroni correction, $p = 0.00043$, no statistically significant correlations were found for any variables related to English use.

4.4.1.3.2 Education in the Target Country

Education in the target country is another variable related to L2 exposure frequently investigated in SLA studies. The results of the current study show that while no statistically significant differences were found between the participants who were in the process of studying towards a degree in England (N=3) and those who were not (N=23). After Bonferroni, $p = 0.00043$, the country where the participants obtained their highest qualification, i.e. Poland (N=20) or UK (N=6), was found to have no impact on the participants’ performance on either the WL or the FS task.

4.4.1.3.3 Length of Residence (LoR)

Length of Residence (LoR) is yet another variable linked to L2 exposure which Waniek-Klimczak and Matysiak (2016) links to higher production rates of non-rhotic variants. In the current study, participants reported LoR in months; the values ranged from 43 to 221, with a mean of 126.62 and standard deviation of 48.681, demonstrating a relatively wide spread of data. After Bonferroni correction, Spearman rho correlation coefficients revealed no statistically significant correlations.

However, while not statistically significant, it might be interesting to point out that when comparing the percentages of different categories of tokens produced by individual participants in Free Speech data, it is clear that most participants with higher LoR values use category one (non-rhotic) variants as the dominant /r/ realisation; 13 participants with longest LoR (50% of the cohort) produced mostly non-rhotic variants, with only one participant (P16MK) using mostly category two-type tokens, and another (P19IM) using category three-

type tokens as the main /r/ realisation. Essentially, this reflects the relationship between higher rates of non-rhotic variants and LoR observed by Waniek-Klimczak and Matysiak (2016), with P16MK and P19MI not conforming to that pattern. Nonetheless, it is important to point out that P19MI was, at least in some respects, an outlier. Not only did she have the longest LoR (221 months), but at the same time was the only participant who employed such a significant number of taps and tap-like realisations (43.33%), with other participants scoring from 0 to 3.64% in that category. A possible explanation for P19MI's high production rates of taps and tap-like variants is discussed in the context of indexicality and metalinguistic awareness (see section 4.6.4.1).

4.4.1.3.4 Section Summary and Discussion

Self-Estimated Level of English upon Arrival was only found to negatively correlate with the percentage of taps and tap-like /r/ realisations in the Word List data set, while Self-Estimated Current Level of English was negatively correlated with the percentage of mispronounced tokens in the WL data. No statistically significant correlations were found for any other variables related to English use.

The lack of significant findings regarding the role of education in the target country on the participants' pronunciation (after Bonferroni) is not consistent with existing studies (Flege et al., 1999; Urponen, 2004), where obtaining formal education in L2 as a medium provided migrants with more L2 exposure and an additional domain to interact in English, which facilitate a shift towards the more L2-like pronunciation.

Although Length of Residence was not found to be statistically significant, individual inspection of individual participants scores demonstrates that for an overwhelming majority of participants with longer lengths of residence (145 months or more), the non-rhotic realisations for non-prevocalic /r/ were dominant in their phonetic repertoire, which suggests that perhaps longer lengths of residence is linked to a shift from the dominance of category two-type variants to category one –type realisations. This would support the findings of studies such as Waniek-Klimczak and Matysiak (2016); Drummond (2010, 2010b, 2012); Flege et al. (1999); Trofimovich and Baker (2007), which show that a longer length of residence in an L2 country can be related to more “native-like” pronunciation. However, due to lack of statistical evidence after Bonferroni, this is merely a suggestion that requires further research.

In addition, the presence of the participant with both the highest LoR value (221 months) and the highest ratio of Polish-like taps and tap-like variants clearly shows that there are cases which do not follow that pattern. While it would be tempting to simply disregard them as outliers, there is also evidence in literature that the relationship between LoR and L2 pronunciation is not always straightforward. For example, Flege et al. (2006) reports that adult Korean migrants to the USA with LoR lengths of three and five years obtained similar scores for accentedness, indicating that the two-year difference in LoR did not have a significant impact on their L2 English pronunciation. Indeed, a number of studies (Derwing et al., 2008; Flege & Fletcher, 1992) suggest that the significance of LoR for L2 pronunciation plateaus after a period of initial rapid improvement, which perhaps sheds some light on why two participants out of the 13 with highest LoR values in this study still employed category two-type variants (approximants, off-glides, /r/-coloured vowels) rather than the most GB-like, category one, realisations of non-prevocalic /r/ (non-rhotic). Hence, while exposure to L2 output may have an impact on L2 accent, it is clear that on its own it is not a sufficient predictor of “native-like” performance.

4.4.1.4 Phonetic Training

Phonetic training in L2 is another variable that may be of particular importance in the context of L2 pronunciation. Three out of 26 participants reported having studied English phonetics during their B.A. programmes in English Language in Poland. The English Phonetics classes they attended were spread over four terms and typically involved two 90-minute practical sessions in a language laboratory a week.

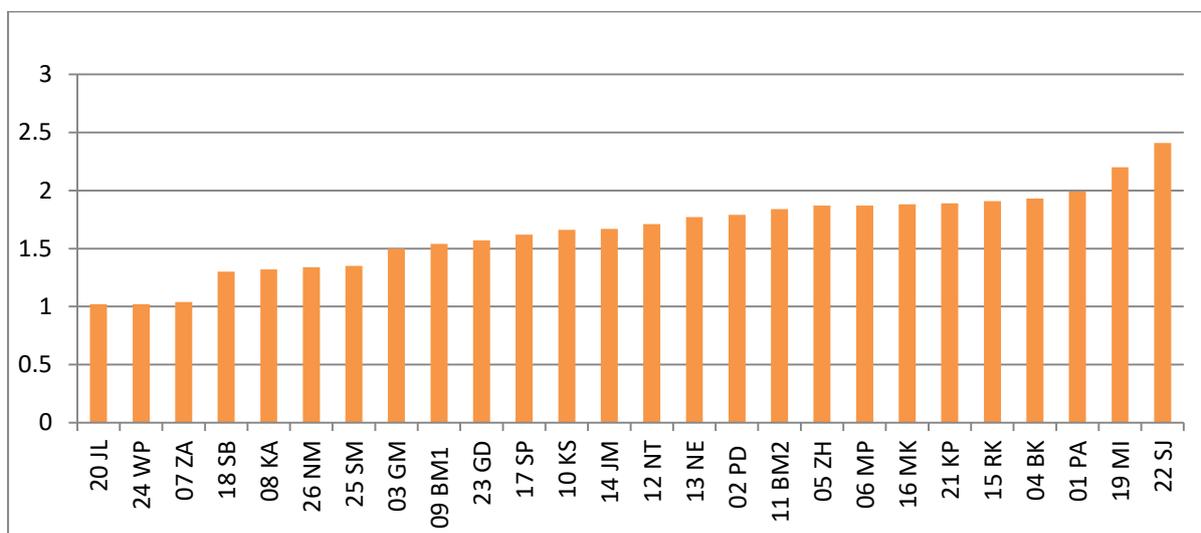
The two groups' mean AAWL /r/-fullness index scores were 1.23 and 1.77 respectively, $t=2.59$, $p = 0.016$ for the those participants who received phonetic training and those who did not. The groups also differed in their performance on the AATotal /r/-fullness index, with the former group's mean of 1.21, and the latter groups mean of 1.71, $t=2.52$, $p = 0.019$. The group who received phonetic training also displayed lower standard deviation (0.16 versus 0.35 for AAWL and 0.16 versus 0.33 for AATotal), which means lower variable spread, i.e., more uniform performance (see also Appendix IV, Table 34).

However, after Bonferroni adjustment, neither T-test for Equality of Means ($p = 0.01$) nor Mann-Whitney U test ($p = 0.00357$) revealed no statistically significant differences between those groups.

However, when individual AATotal /r/-fullness index scores are examined, it is evident that three out of the four lowest /r/-fullness scores were achieved by the participants who had had phonetic training: P20JL, P07ZA and P18SB. The participant with the fifth lowest score, P08KA, was in the final year of her undergraduate degree programme in foreign languages at a UK university, so although she had not received any explicit training in English phonetics or phonology, she was familiar with the basic concepts related to pronunciation (confirmed after the interview in a phone call).

Figure 16

AATotal /r/-Fullness Index per Participant



Note. Total /r/-fullness index values for each participant, arranged from the lowest to the highest value.

On the other hand, the participant who received the second lowest AATotal /r/-fullness index score, P24WP could be regarded as an atypical case, as his IELTS level of English was only 6.83, which was substantially lower than for the other four low-scorers, with P20JL’s IELTS LoE at 7.33, P18SB’s LoE at 7.5, P07ZA’s LoE at 9.0 and P08KA’s LoE at 7.83. Moreover, despite his low /r/-fullness index value, P24WP’s delivery was not always intelligible, somewhat rushed and with many inaccuracies, as well as the highest production ratio of idiosyncratic (non-L1-like and non-L2-like) /r/ realisations out of the whole cohort: 4.72% versus 1.19% by the second highest-scoring participant (see section 4.3.5). The fact that P24WP produced mostly non-rhotic forms despite his relatively low proficiency level could perhaps be explained by the fact that although he had received relatively little English instruction in Poland (three years), he was the participant who received the most English language instruction in the UK: 48 months, which was 10 months more than anyone else.

Also during the interview, P24WP mentioned that he had made significant progress in L2 in the UK learning from his colleagues, and even mentioned that one of his former managers had made a deliberate, sustained effort to teach him English. It could perhaps be concluded that the participant's exposure to non-rhotic varieties of English in the UK allowed him to achieve almost GB-like (native-like) levels in terms of /r/-fullness despite his otherwise relatively low level of English.

It seems hardly a coincidence that three out of four most native-like speakers in the study had received explicit instruction in English phonetics. This observation seems to be consistent with the findings of several SLA studies investigating L2 pronunciation in adult speakers, e.g. (Birdsong, 2007; Bongaerts et al., 1997) which show that the most native-like L2 speakers reported not only high levels of motivation to speak English without a foreign accent, but also having received phonetic instruction.

Nonetheless, while the impact of phonetic training seems to be important, as all those participants who had attended phonetics classes scored significantly higher on a range of measures, positioning themselves close to the L2-like end of the /r/-fullness continuum, the lack of statistical evidence after Bonferroni adjustment and the small sample size in this study do not allow for making any generalisations.

4.4.2 Attitudinal Factors

Gardner's model (2010), which was adopted in this study, recognises the significance of cultural aspects of motivation for second language speakers' success: as they become more competent L2 users, the learning process itself gradually engages them with cultural elements of the target language community. According to Gardner (2010), the more this affective component is engaged, the more likely those L2 speakers are to "experience changes in their self-identity and find themselves identifying in part, at least with the other community" (p. 3), which, in the context of this study, would mean a degree of alignment with the host country possibly manifested through significant usage of native-like variants. To account for these motivational and affective factors, the following variables proposed by Gardner and adapted in the light of (Drummond, 2010) were employed: Motivation, Integrativeness, Instrumentality (instrumental orientation), Language Anxiety, Attitude towards the General British Accent, Attitude towards the General American Accent. However, after Bonferroni adjustment, neither the Pearson Correlation test ($p = 0.00166$) nor Spearman's Rho ($p =$

0.00064) found any statistically significant correlations for any of the variables listed (see Appendix IV, Table 19).

These results are somewhat surprising in that many SLA studies regard motivation, particularly its component linked to integration into the target language society, as playing an important function in producing native-like forms (Birdsong, 2007; Bongaerts et al., 1997).

4.4.3 Social Factors

4.4.3.1 Gender

The participants in the study were both female (N=12) and male (N=14). Student's T test for independent samples and Mann-Whitney U test showed no statistically significant correlations for any of the dependent variables. This result is somewhat unexpected, considering that gender effects have been frequently reported in sociolinguistic literature, particularly within the classic, variationist approach to sociophonetics. Studies investigating different variables in different contexts often demonstrated that when the variable in question did not represent a change in progress, women tended to employ more standard variants than men (Labov, 1990; Trudgill & Trudgill, 1974). Stolarski (2013b), who researched /r/ variability in Polish, reports that the male participants in his study typically pronounced /r/ “less clearly” than the female participants, with the latter group’s realisations displaying a higher strength of closures and lower rates of lenited variants, which he presented as tentative evidence of social stratification of /r/ realisations. Also research by Drummond (2010, 2010b, 2011, 2012, 2013), researching L2 English variation in among Polish migrants living in the Manchester area reported the existence of a gender effect, with women using higher ratios of native-like variants, and men producing higher rates of non-native like realisations.

However, the result aligns with Ryan (2018), whose research on the acquisition of local accent features by Polish teenagers in Glasgow found no gender effect. In addition, as Eckert and McConnell-Ginet (1999) convincingly argue, when the different place of men and women within different communities is taken into consideration, it constitutes an intervening variable; in other words, it is not gender itself, but rather the various roles assigned to genders by different communities that lead to differences in the use of linguistic variables. Research on African-American women living in two different communities by Nichols and Tanksley (2004) illustrates Eckert’s argument: in both communities women’s use of standard variants was linked to their employment situation. However, while in one community women were able to find employment beyond the island, in the other their professional interactions were

largely restricted to other islanders. This was reflected in their usage of creole versus standard features: women in the first community employed more standard variants than men, while in the other community, it was male speakers who used more non-creole forms. Similarly, Sharma (2011) investigated the use of Punjabi-like and British English accent features in the speech of second generation British Asians. She found that the different usage patterns she had identified stemmed from the different position of the two genders within the community and the resulting differences in social networks diversity, with young females displaying similar usage patterns to older males, and younger males displaying similar patterns to older females.

Classifying participants into binary categories without considering any other categories assumes that biological gender on its own could influence pronunciation patterns, which is at the very least controversial. Therefore, future research needs to consider gender alongside other categories.

Considering this, it seems that the lack of any identifiable gender effect in this study could perhaps be attributed to the relative lack of major differences in the social roles attributed to genders as represented in the sample, as all the participants were in a similar age range and all worked in a range of occupations. Polish migrants often display high levels of mobility not only across national borders in the EU, but also within national labour markets, and are able to frequently change jobs (Tittle & Kerr, 2016; Trevena et al., 2013). It seems that this mobility, especially for those Polish migrants who are single (Trevena et al., 2013) is not conducive to maintaining cohesive gender roles across the migrant population, resulting in the lack of distinct gender-related patterns in the production of non-prevocalic /r/-variants.

It also needs to be acknowledged that it is possible that fine phonetic variation within phonetic categories employed by the two genders might still exist, as reported by Stolarski (2013b) in Polish; however, no gender differences in terms of the usage of the categories employed in this study has been found. Further research with a focus on articulatory detail and appropriate research instruments is therefore necessary.

4.4.3.2 Ties with Poland

The quantitative part of this study included several measures that were intended to operationalise the participants' ties and alignment with their native country, which has been previously reported as a significant factor in several sociophonetic studies on Polish migrants. For example, Newlin-Łukowicz (2015) investigated the impact of orientation towards the

home and host countries on the adoption of three regional features of New York City English (NYCE) by first and second generation Polish New Yorkers, whom she categorised as oriented towards America, Poland or the Polish community in New York City. Her research identified the maintenance of transnational ties as the most robust predictor of linguistic variation.

In the UK, Drummond (2010, 2012), who investigated Polish migrants' use of a local accent feature common in the Manchester area, <ing> realised as [ɪn] rather than [ɪŋk], found that those speakers who were planning on remaining in the UK were less likely to employ native-like variants, local variants. A similar link between sociocultural alignment and the use of specific English phonetic resources was reported by Kozminska (2016, 2020), who investigated a group of 30 young Polish migrants living in the UK, whom, based on their social networks, future plans as well as rich interview data, she described as either "Polish Poles", "In-betweens" or "Cosmopolitans". Kozminska (2020) found that those "three ways of experiencing the world" (p. 2) were linked to fine phonetic variation in her participants' Polish speech, with the "Polish Poles" more strictly adhering to Standard Polish, and the "Cosmopolitans" frequently incorporating selected phonetic English features, such as the fall-rise intonational contour and longer VOT values for stops, into their Polish speech.

In light of the studies discussed above, it was expected that in the current study, the participants' alignment with Poland would be reflected in their choice of /r/ variants. Nevertheless, Spearman rho correlation coefficients test found no statistically significant correlations for the variable Future Plans regarding going back to Poland or remaining in the UK. Similarly, the Number of Weeks Spent in Poland per year, which was another variable to represent the participants' "alignment" and intensity of social ties with family members back in Poland, yielded no significant results.

4.4.3.3 English Use Index and Social Grade

4.4.3.3.1 English Use Index

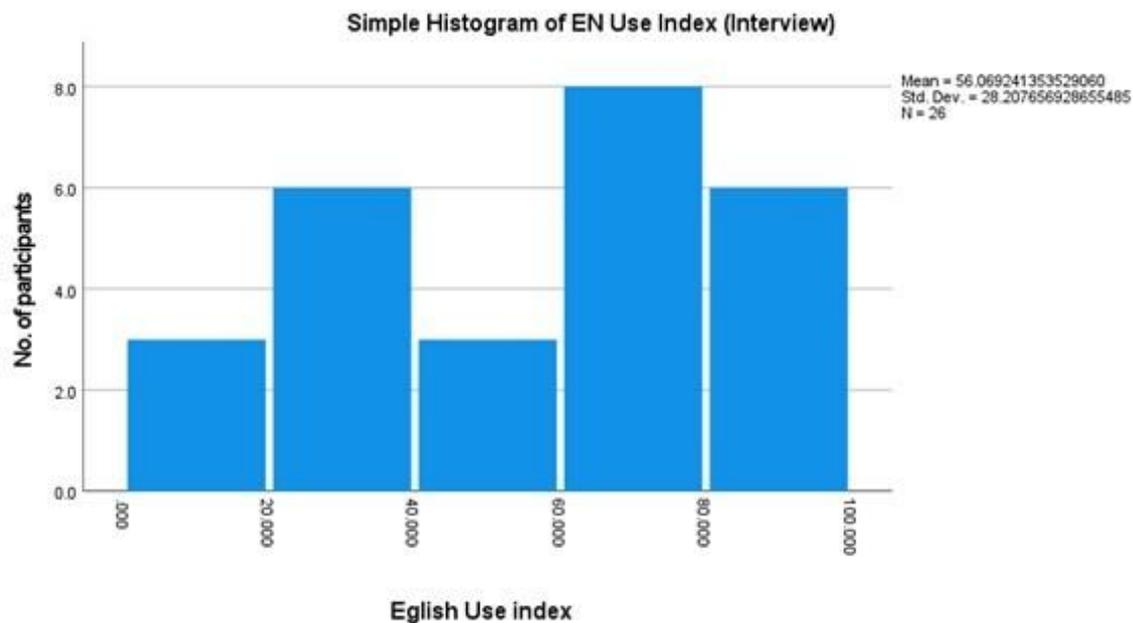
Unlike Estimated Language Use, which was essentially looking to measure exactly what the name indicates, English Use index was intended as a measure of "Englishness" of the participants' social networks and their involvement in them through that language. As discussed in the Methodology chapter, the measure was inspired by Sharma's (2011; 2011) Network Diversity Index. However, the emphasis here was not on how diverse one's social

networks were, but rather on to how “English-oriented” they were and how involved the participants were in interactions with the individuals in the domains they listed.

Participants reported values ranging from 2.74 to 96, with a mean of 56.07 and standard deviation of 28.21. As presented in Figure 17, for nine participants English Use index values ranged below 40%, as represented by the first two bins on the left of the histogram; three participants obtained scores between 40% and 60% (the middle bin), while the majority (represented by the last two bins, N=14) scored above 60%, meaning that those participants estimated that their interactions within their social networks involved the use of English for at least 60% of all interaction time.

Figure 17

A Simple Histogram of English Use Index Values Among the Participants.



It was hypothesised that the participants with high English Use Index values, i.e. those spending the most time with native speakers of English or interacting in English with other English-speaking migrants, would be placed closer to the native-like end of the /r/-fullness continuum. However, after Bonferroni correction ($p = 0.00166$ for Pearson and $p = 0.00016$ for Spearman’s Rho), the results obtained do not support this predicted outcome, as the variable did not show any significant correlations with any dependent variables. This could perhaps be linked to the quality of input: although most interactions in English involved interacting with native speakers of that language, they did not necessarily involve increased exposure to non-rhotic varieties. Moreover, as reported in the interviews, English was also often used to communicate with other migrants or even with other Poles in the presence of

other, non-Polish speaking friends or partners. This perhaps is one reason why increased involvement with one's English-speaking social networks did not correlate with higher production ratios of L2-like variants.

4.4.3.3.2 Social Grade

In the current study social grade replaced class, a commonly investigated variable in classic variationist studies (Labov, 1972; Trudgill & Trudgill, 1974). It was felt that the context of migration required a different approach, since, as Drummond (2010) observes, the social position of migrants in the host country can be significantly different from the one in their homeland, with many experiencing “status drop”, which is why categories proposed by National Readership Survey (NRS) seemed more suitable to operationalise the participants' employment situation and corresponding socio-economic status. For the purposes of statistical analysis in SPSS, each ABC1 grade was assigned number, i.e. A = 1, B = 2, C1 = 3, C2 = 4, D = 5 and E = 6.

Participant scores ranged from 1 (N=2) to 5 (N=5), with a mean of 3.54 and standard deviation of 1.174, indicating a relatively wide data dispersion. Spearman's rho identified a significant negative correlation between Social Grade and the percentage of mispronounced tokens in the Word List data set (-0.65^{**} , $p = 0.000$), with the significance threshold (after Bonferroni adjustment) $p = 0.00043$.

What is particularly worth highlighting here is that both the participants' Social Grade and Estimated Current Level of English correlate with the percentage of mispronounced tokens in the Word List data set, which may indicate that proficiency in English, as self-estimated by the participants, and their Social Grade are not independent, as indeed high proficiency in English is required to obtain more prestigious jobs and positions.

4.4.4 Section Summary

This section has presented results of quantitative data analysis regarding acquisitional, attitudinal as well as social variables and discussed their impact on the participants' non-prevocalic /r/ realisations. The acquisitional variables which have been identified as a predictor of the participant's phonetic choices, i.e. lower production ratios of Polish-like variants were Formal Instruction in English in Poland, IELTS Grammatical Range & Accuracy as well as Self-estimated Level of English upon Arrival. In addition, Self-estimated Current Level of English correlated with lower ratios of mispronounced tokens produced on the Word List task.

Out of all the attitudinal variables included in the model, none were identified as statistically significant predictors of pronunciation. The only social factor identified as statistically significant was Social Grade, which was identified as a predictor for lower ratios of mispronounced tokens produced on the Word List task.

One significant issue with this analysis is that due to the relatively low number of participants (N=26) it was not possible to employ multiple regression analysis, which would have allowed to detect any co-linearity between independent variables and arrive at a reduced model, with only key predictors working independently. This approach would also allow to determine how much of variance is determined by which independent variable. Nevertheless, the priority of this study was to collect as much language data as possible, and multiple regressions were employed for the analysis of phonetic factors which affect participants' repertoires. While the preliminary analysis employed identified a large number of variables as statistically significant, in order to correct for type one errors, Bonferroni adjustment was employed; this greatly reduced the number of statistically significant variables in the model.

Since this study is largely exploratory, as very little research exists on pronunciation of Polish migrants living in England, with Drummond (2010, 2010b, 2012), Waniek-Klimczak and Matysiak (2016) and Kozminska (2016, 2020) being notable exceptions, with only the former two authors focusing on L2 English pronunciation of Poles, and the latter investigating the use of English phonetic features in L1 Polish. Therefore, even though the statistical analysis presented above mainly focused on identifying factors which still warrant further investigation, it is hoped that this study has at the very least laid the groundwork for subsequent research.

4.5 Internal Constraints on Rhoticity and Non-prevocalic /r/ Realisations

The previous section presents the findings of this study regarding external, i.e., attitudinal and social constraints. This section focuses on the results of the analysis of potential internal constraints on variability in non-prevocalic /r/ realisations, such as lexical stress, syllable structure, the quality of the preceding vowel, the place of articulation of the preceding and the following consonant and the presence of another, preceding /r/ (RQs 1a and 3a). Word frequency was also included in the model.

While the results presented in the previous section involved statistical analysis with participants as the unit of observation, for the analysis of linguistic constraint discussed in

this section, the observation unit was speech tokens, i.e. Word List tokens with non-prevocalic /r/.

The speech data subjected to statistical analysis were the same Word List tokens as in the other part of analysis; however, in order to account for the potential impact of preceding vowel quality, 461 tokens labelled as containing a “mispronounced vowel” (see the Methodology chapter) were removed from the data set, since vowel quality drastically different from vowel the stimuli were meant to elicit would have made it impossible to investigate the impact of vowel quality on the type of the following post-vocalic /r/.

4.5.1 Results

4.5.1.1 The Use of Category One Tokens

Category one comprised non-rhotic realisations, i.e. the most L2-like variants, not in terms of the exact vowel quality, as this was not within the remit of this study, but in terms of the lack of any constrictive /r/ realisation. The mean value for the percentage of category one tokens in the Word List data (AAWL.1.perc) was 35.29, with a standard deviation of 12.10.

Initial analysis using the General Model revealed six predictors for AAWL.1.perc, which were Word Frequency, Stress, Preceding NEAR Vowel, Preceding NORTH Vowel, Preceding letter Vowel and the presence of a Preceding Consonant. Taken as a set, these predictors accounted for 28% of the variance in the dependent variable, i.e. the percentage of category one tokens in the WL data. Again, more variables were added to the model, and the resulting Detailed Model (see Table 10 in section 3.7.2.2.2) accounted for 34% of the variance in dependent variable: $F(8, 216) = 14.10$, $p = 0.000$, $R^2 = 0.34$. Backward multiple regression analysis with bootstrapping identified the following statistically significant predictor variables, listed below from the strongest to the weakest (see also Appendix IV, Tables 67-70):

- preceding NORTH Vowel (standardized beta coefficient=-0.27, $t = -4.45$, bootstrap results significant at the 0.01 level ($p = 0.001$));
- preceding NEAR Vowel (standardized beta coefficient=-0.25, $t = -4.17$, bootstrap results significant at the 0.01 level ($p = 0.001$));
- preceding Type B Consonant (dental, alveolar, post-alveolar and palatal) (standardized beta coefficient=0.24, $t = 3.87$, bootstrap results significant at the 0.01 level ($p = 0.001$));

- the presence of a Type C Coda (velar) (standardized beta coefficient=-0.22, $t=-3.93$, bootstrap results significant at the 0.001 level ($p = 0.001$));
- Priming rVCVr: the presence of a preceding prevocalic /r/ (standardized beta coefficient=0.21, $t=3.57$, bootstrap results significant at the 0.01 level ($p = 0.001$));
- word Frequency (standardized beta coefficient=0.20, $t=3.46$, bootstrap results significant at the 0.05 level ($p = 0.034$));
- Preceding Type A Consonant (bilabial or labio-dental) (standardized beta coefficient=0.17, $t=2.75$, bootstrap results significant at the 0.01 level ($p = 0.004$));
- Preceding letter Vowel (standardized beta coefficient=0.16, $t=2.44$, bootstrap results significant at the 0.01 level ($p = 0.008$)).

4.5.1.2 The Use of Category Two Tokens

Category two comprised offglides, approximants and /r/-coloured vowels realisations which are characteristic of many native varieties of English, but which are not used in the postvocalic position unless followed by another vowel. The mean value for the percentage of category two tokens, i.e. approximants, offglides and /r/-coloured vowels, in the Word List data (AAWL.2.perc) was 59,72, making it the largest subset in the data set, with a standard deviation of 11.94. Backward multiple regression analysis with bootstrapping identified five predictor variables in the General Model, which, as a set, accounted for 19.5% of variance in the dependent variable, i.e. the percentage of category two tokens in the WL data: $F(5, 219)=10.62$, $p = 0.000$, $R^2=0.19$. The predictors identified were preceding NORTH Vowel, Preceding Consonant, Priming (the presence of a preceding /r/), Word Frequency and Preceding NEAR Vowel. In order to explore the impact of the different types of priming /r/ and different preceding consonants, more variables were added, and the resulting Detailed Model was analysed, yielding the following 12 predictor variables listed below in the order of strength:

- Preceding Type B Consonant (dental, alveolar, post-alveolar and palatal) (standardized beta coefficient=-0.42, $t=-4.65$, bootstrap results significant at the 0.01 level ($p = 0.001$));

- Preceding Type A Consonant (bilabial or labio-dental) (standardized beta coefficient=-0.36, $t=-3.93$, bootstrap results significant at the 0.01 level ($p = 0.003$));
- Preceding letter Vowel (standardized beta coefficient=-0.28, $t=-3.29$, bootstrap results significant at the 0.01 level ($p = 0.003$)).
- Preceding NORTH Vowel (standardized beta coefficient=0.24, $t=4.02$, bootstrap results significant at the 0.01 level ($p = 0.002$));
- Preceding Type C Consonant (velar or glottal) (standardized beta coefficient=-0.24, $t=-2.79$, bootstrap results significant at the 0.01 level ($p = 0.005$));
- the presence of a Type B Coda (dental, alveolar, post-alveolar and palatal) (standardized beta coefficient=-0.22, $t=-3.86$, bootstrap results significant at the 0.01 level ($p = 0.001$));
- Word Frequency (standardized beta coefficient=-0.21, $t=-3.68$, bootstrap results significant at the 0.01 level ($p = 0.006$));
- Priming VrCVr: the presence of a preceding postvocalic /r/ (standardized beta coefficient=0.21, $t=2.49$, bootstrap results significant at the 0.01 level ($p = 0.01$));
- Priming rVCVr: the presence of a preceding prevocalic /r/ (standardized beta coefficient=-0.19, $t=-3.12$, bootstrap results significant at the 0.05 level ($p = 0.013$));
- the presence of a Type C Coda (velar) (standardized beta coefficient=-0.19, $t=-3.06$, bootstrap results significant at the 0.01 level ($p = 0.001$));
- preceding NEAR Vowel (standardized beta coefficient=0.17, $t=2.80$, bootstrap results significant at the 0.01 level ($p = 0.006$));
- Preceding Type D Consonant (labial-velar) (standardized beta coefficient=-0.13, $t=-1.82$, bootstrap results significant at the 0.05 level ($p = 0.026$)).

The predictors identified comprised eight negatively correlated variables and four positively correlated variables. Five of the statistically significant positive correlations identified for the percentage of category two tokens (offglides, approximants, /r/-coloured vowels) were also negatively correlated with the dependent variable of percentage of category one tokens (non-rhotic variants), while three negative predictors for the percentage of category two variants

functioned as positive predictors for the ratio of non-rhotic realisations (see section 4.5.1.1). The four additional predictors that emerged for the use of approximant-like variants were Preceding Type C Consonant (velar or glottal), Preceding Type D Consonant (labial-velar), the presence of a Type B Coda (dental, alveolar, post-alveolar and palatal) and Priming VrCVr: the presence of a preceding postvocalic /r/.

4.5.1.3 The Use of Category Three Tokens

As discussed before, category three comprised taps and lenited taps, i.e., more Polish-sounding realisations. The mean value for the percentage of category three tokens, i.e. taps and tap-like variants, in the Word List data (AAWL.3.perc) was 4.42, with a standard deviation of 5.34. Having analysed all the predictor variables in the General Model (the presence of a coda, lexical frequency, preceding consonant, preceding vowel, priming, stress), backward multiple regression analysis with bootstrapping identified only one statistically significant predictor variable, i.e. the presence of a consonant following the postvocalic /r/. However, the model only accounted for 2.3% of the variance in dependent variable: $F(1, 223)=5.22$, $p = 0.000$, $R^2=0.023$. The standardized beta coefficient for the presence of a coda was 0.15, $t=2.28$, bootstrap results significant at the 0.05 level ($p = 0.034$).

In order to investigate that relationship more closely, more variables were added to the model (for details, see Methodology, section 3.7.2.2.2), some of which represented a range of places of articulation for the consonant in the coda (bilabial and labio-dental; dental, alveolar, post-alveolar and palatal; velar; labial-velar). The Detailed Model accounted for 7.7% of the variance in dependent variable: $F(2, 222)=9.24$, $p = 0.000$, $R^2=0.077$. The most important predictor for AAWL.3.perc was coda type B, i.e. one containing a dental/alveolar/post-alveolar or palatal consonant (standardized beta coefficient=0.24, $t=3.72$, bootstrap significance $p = 0.004$).

The Detailed model also identified another predictor variable for the percentage of taps and lenited taps, which was the occurrence of a preceding postvocalic /r/ in the previous syllable of the word (standardized beta coefficient=-0.185, $t=-2.82$, bootstrap significance $p = 0.004$). This correlation was negative, meaning that if there was a preceding postvocalic /r/ in a Word List stimulus, the word-final non-prevocalic /r/ was less likely to be realised as a category three-type variant.

4.5.2 Discussion of Internal Constraints

The results presented above are summarised and discussed in this section, which has been organised by independent variable, with related independent variables, such as all the preceding vowels, discussed in one subsection. The results are contextualised in the light of the differences between Polish and English phonology, coarticulatory effects, as well as the concept of ease of articulation or economy of effort. This concept seems to characterise movement in general and is an important governing factor in speech planning (Guenther, 1995; Perkell et al., 2000): the motor control system tries to reduce the amount of physical effort required to make articulatory movements and thus conserve energy by producing “easier” sounds. While present in both native and non-native speech alike, it seems that in when choosing an “easier” variant, most bilingual speakers have two different L1 and L2 sound systems available to them, which means that even when communicating in L2, they may resort to using L1 sounds for ease of articulation. It also important to point out that the following interpretation of the findings is not based on articulatory observations, but rather emerged from existing studies and the author’s knowledge of articulatory processes; as such, it is to some extent speculative; therefore, in order to verify some of the interpretations presented below, a study with a focus on articulatory detail should be undertaken.

In addition, although Word Frequency was included in this part of analysis to account for the largest amount of variance possible within the limitations of this study, its relationship with the different dependent variables has already been discussed in the first part of this chapter, which is why the following sections will only mention lexical frequency in relation to other independent variables.

4.5.2.1 Preceding Vowels

Vowels have been reported to have an impact on the following postvocalic /r/ in different, both native and non-native varieties. In American English they have been reported to influence the degree of retroflexion (Mielke et al., 2010); in General British they served as predictors of an intrusive /r/ (Hannisdal, 2010), while in L2 English of Polish students they were found to influence the speakers’ choices between rhotic and non-rhotic realisations (Szpyra, 2014). The results of this study align with those studies, demonstrating that, in Polish migrants’ L2 English, vowels do have an impact on the following non-prevocalic /r/.

Indeed, the two strongest negative predictors for the percentage of category one, non-rhotic variants are the NORTH vowel and the NEAR vowel, as signified by their highest

standardized beta coefficients values ($t=-4.45$, and $t=-4.17$ respectively). This means that the non-prevocalic /r/ in words with those two vowels is more likely to be constrictive, i.e. rhotic. The fact that there is also a positive correlation between those vowels and the usage of category two-type variants indicates that while both NORTH and NEAR encourage rhoticity, they also predict the use of L2-like offglides, approximants or /r/-coloured vowels.

Another vowel that was identified as a statistically significant predictor for the use of non-rhotic variants, albeit not a very strong one ($t=2.44$), was the lettER vowel. Unlike NORTH and NEAR, lettER was positively correlated with the percentage of category one tokens in the data set, meaning it was conducive to non-rhoticity.

As discussed in the Literature Review (see section 2.2.3.3.2), there is evidence from studies on American English rhotics that back vowels, such as /ɔ:/ or /ɑ:/, strongly encourage retroflexion (Mielke et al., 2010). A similar effect of back vowels on the following /r/ was reported by Hannisdal (2010), who found that in GB intrusive /r/ was significantly more frequent after /ɔ:/ and /ɑ:/ than /ə/. While the backness of vowels could indeed be a factor explaining why NORTH is the strongest predictor of the use of approximant-like realisations in this study, it does not explain why it is only NORTH, not also START, that acts as a predictor for the use of category two, rhotic variants.

It seems that a possible explanation could again be found if the economy of effort and the issue of tenseness are considered. Polish has a relatively limited vowel inventory compared to English; it consists of six oral vowels, some of which also have their nasalised variants (Dłuska, 1981; Wierzchowska, 1971). Unlike in English, in Polish there are no distinction in duration or tenseness, i.e., the degree of tension in the muscles of the tongue which is required for articulation. The Polish vowel that is the closest “equivalent” to the English NORTH vowel is /ɔ/, which is sometimes described as intermediate between the English vowels /ɔ:/ and /ɒ/ (Balas, 2018). Since producing a native-like NORTH vowel would require maintaining adequate length as well as a level of tenseness, it seems that in accordance with the concept of economy of effort (Guenther, 1995; Perkell et al., 2000), some Polish speakers of L2 English avoid the extra muscular effort required to achieve a native like quality and quantity NORTH vowel, and instead produce a shorter vocalic element followed by an approximant.

According to Halle (1977), the degree of how tense a vowel is increases with the height of the tongue; although both /ɑ:/ and /ɔ:/ are back vowels, the tongue is raised significantly higher

for the latter, which, according to Halle (1977), results in more tenseness, hence more muscular effort needed for articulation. Therefore, it could be argued that producing non-rhotic variants of START words is easier for Polish speakers of L2 English than pronouncing non-rhotic NORTH words.

An alternative explanation not involving tenseness would be that it is more difficult to make an apical gesture after START simply because of its openness: since articulation of that vowel requires the jaw to be lowered, it takes more articulatory effort, i.e. the tip has to travel a longer distance to get to the roof of the mouth to produce the approximant effect, which could also account for the fact that START is less conducive to the use of rhotic variants than NORTH.

The second strongest predictor for the use of L2-like rhotic variants was the presence of the NEAR vowel; this can perhaps again be explained by phonological differences between Polish and English. While lacking diphthongs, Polish does have sequences of vowel and glides which may be regarded as comparable to English closing diphthongs, but no segments comparable to English centring diphthongs (Balas, 2009). This is why the latter (i.e., diphthongs ending in a schwa) are often regarded as particularly challenging for Polish speakers of L2 English (Sobkowiak, 2008). When native-like realisations have not been adopted into their phonetic inventory, some speakers tend to produce non-rhotic realisations by resorting to /j/-breaking, i.e., inserting a glide between the first and the second element of the diphthong (Balas, 2009). However, other speakers coped with the challenge by using an /i/-like first element and simply employing a constrictive /r/ instead of the second vocalic element. While using a trill or a tap-like variant would most likely mean transfer from Polish and be a potential indicator of a foreign accent, approximants are commonly used in rhotic native varieties of English, such as GA; therefore it is possible that /r/ is regarded by some speakers as the “preferable” variant.

Finally, the positive correlation of the letter /ə/ vowel with the percentage of non-rhotic variants is consistent with Szpyra-Kozłowska (2018), who reports that even those Polish students of L2 English whose pronunciation she described as “predominantly rhotic” were more likely to produce a non-rhotic form of lexical items belonging to the letter set if the /r/ was word-final. This relationship between the two variables can perhaps be explained by a combination of the phonological differences between Polish and English, linguistic transfer, economy of effort and L2 exposure. Although Polish has neither vowel quantity distinction,

nor a vowel with a mid-central quality, Polish speakers of L2 English often replace the sound with Polish vowels [ɛ],[a] or [ɨ] (Bogacka et al., 2006). The replacement poses no intelligibility issues and is a relatively “easy” fix for those speakers who have not acquired the GB variant. Since, as it has been already established, the ratio of non-rhotic realisations correlates with word frequency, and is also related to Length of Residence, it can be assumed that participants’ prior exposure to lettER words in their spoken form is also a part of the equation here. Therefore, once a speaker is familiar with the non-rhotic form, it becomes the “easier” option, allowing speakers to avoid the articulatory effort of producing the postvocalic /r/ where they can avoid one.

4.5.2.2 Coda Type

There is some evidence from existing studies that the final consonant in the coda does have an impact on the quality of the preceding postvocalic /r/. Mielke et al. (2010) report that for the American English speakers they investigated, retroflexion rates were higher in closed syllables, particularly before /l/. On the other hand, Szpyra-Kozłowska (2018) notes that one of the contexts which was conducive to the production of non-rhotic variants in Polish-accented English of secondary school students involved postvocalic /r/ before consonants, e.g. “morning”, “birthday”, “darling”. The results of this study show that both type B (dental, alveolar, post-alveolar or palatal) and type C (velar) codas predict the category of the postvocalic /r/ they follow.

Category C (velar) coda was the fourth strongest negative predictor of the percentage of non-rhotic variants, as well as a positive predictor of category-two /r/ use, which means that it encouraged the use of English-like rhotics realisations. On the other hand, the presence of a category B coda (dental, alveolar, post-alveolar and palatal) was a negative predictor of category two /r/ (approximants), but was positive correlated with AAWL.3.perc, i.e., the percentage of Polish-like taps and lenited taps.

The positive correlation between a type-C velar coda and the use of approximants could perhaps be explained by the fact that velar consonants do not enforce opposing anticipatory articulatory demands on the blade of the tongue, which is free to rise to the post-alveolar region.

On the other hand, the interactions between the presence of a type-B coda (one consisting of a dental/alveolar/post-alveolar or palatal) and the increased likelihood of producing a tap-like variants seem to be consistent with the concept of ease of articulation or economy of effort,

whereby energy is conserved by articulating “easier” sounds. In this particular case, it seems that for those speakers who opt for a rhotic variant for the non-prevocalic /r/ in a r+ C coda, moving the blade into the postalveolar region in order to produce a friction-free, L2-like approximant before a following alveolar consonant is the more “costly” option, while throwing the apex towards the alveolar region to produce a tap, often characterised by incomplete closure and accompanied by friction, is the more economic choice.

Moreover, in their investigation of rhotics in American English, Mielke et al. (2010) found that r+C codas favoured higher degrees of retroflexion. While it was not possible to determine if the same increased degree retroflexion is characteristic of the rhotic forms of words produced Polish speakers of L2 English using the research tools employed in this study, it may be the case that for some speakers increased retroflexion in the vicinity of a following consonant, particularly an alveolar one, would result in the production of retroflex fricatives or flaps, i.e. also category three-type tokens, as was the case for several participants, for example for P01PA in “roars”, P04BK in “carers”, P13NE in “rears”, P17SP in “third”, P19MI in “sort” P22SJ in “sort” and P26NM in “report”. This is because on its way from the retroflex position to the alveolar ridge the blade is likely to make brief contact with the postalveolar/alveolar region, resulting in retroflex fricative or flap variants, as avoiding this contact would require a considerable amount of control over fine motor skills, which some L2 English speakers may not have.

4.5.2.3 Onset (Preceding Consonants)

As explained in the Methodology chapter, section 3.5.4.2, the current study employed four categories to account for the different places of articulation of the consonants in the onset of the syllable with the non-prevocalic /r/ investigated; these are presented in Table 22.

Table 22

Categories for Onset Employed in the Study

Preceding Consonant in the CVr Onset	A	bilabial or labio-dental
	B	dental, alveolar, post-alveolar or palatal
	C	velar or glottal
	D	labial-velar

Analysis using the General Model showed that the presence of an onset was positively correlated with the percentage of non-rhotic realisations, and negatively correlated with the

use of rhotic L2-like realisations. Further analysis using the Detailed Model showed that both type-A (i.e. bilabial or labio-dental) and type-B (dental, alveolar, post-alveolar or palatal) consonants in the onset correlated with the percentage of non-rhotic variants, with Type B onset being the third strongest out of the eight predictors of non-rhoticity overall.

The fact that consonants involving the apex, the blade or even the front of the tongue (type B) predict non-rhoticity could perhaps again be explained by ease of articulation, since producing an approximant /r/ at the end of a in a CVr sequence would require using the same active articulator within a relatively short time, which needs considerable fine motor control. Therefore, it seems that producing the non-rhotic variant in this context requires less articulatory effort. However, it is not fully clear why bilabial or labio-dental onsets also predicted non-rhoticity, or why A-, C- and D-type onset were negatively correlated with the percentage of category 2 tokens, i.e. discouraged the use of offglides, approximants, alongside B-type consonants. It is possible that a study with a focus on articulation and using appropriate research instruments would be able to answer these questions.

4.5.2.4 Priming

The presence of a preceding prevocalic /r/ in the onset of the same syllable as the other, non-prevocalic /r/ (PRIMING.Prevoc.RVr) was not statistically significant. However, the presence of a word-initial prevocalic /r/ in words such as “return” or “refer”, i.e. with the preceding /r/ in the preceding syllable (PRIMING.Prevoc.RVCVr), was positively correlated with the percentage of non-rhotic realisations and negatively correlated with the use of approximants and /r/-coloured vowels. This indicates that when the priming, prevocalic /r/ and the postvocalic /r/ occur in two different syllables, the speakers are more likely to produce a non-rhotic variant. On the other hand, the presence of a preceding postvocalic /r/ (PRIMING.Postvoc.VRCVr) was identified as a predictor for the use of category two tokens, i.e. L2-like constrictive variants. It was also a negative predictor for the use of L1-like taps and lenited taps, i.e. category three tokens.

These correlations could perhaps be explained by long term coarticulatory effects. Kelly and Local (1986) suggested that resonances of /r/ colour the syllable which they are a part of, but can also impact segments in neighbouring syllables. Heid and Hawkins (2000) claim that in some cases, these coarticulatory effects can extend for even up to five syllables. Therefore, once constrictions in the vocal tract have been formed to articulate the word-initial /r/, that articulatory setting can be maintained to some extent throughout the following segments,

resulting in the impression of rhoticity. It seems reasonable to assume that such “lagging” long term articulatory settings are more likely to be maintained if both /r/s are separated by a single vowel rather by several segments, which is perhaps why PRIMING.Prevoc.RVCVr is more conducive to non-rhoticity. Similarly, it could be argued that PRIMING.Postvoc.VRCVr was identified as a predictor of approximant and /r/-coloured vowels due to the fact that, assuming the priming /r/ was indeed realised as an approximant or an /r/-coloured vowel, the distance between the two /r/s was that of two segments only, hence the greater likelihood of the articulatory setting employed for the first /r/ continuing for the following /r/.

In order to further investigate the impact of the preceding priming /r/ on the following non-prevocalic /r/, not solely on the basis of the presence of the priming /r/ in the word stimuli, but based on the actual quality of the two /r/s as realised by the participants, further analysis was conducted. As reported by Scobbie et al. (2015), about 30% of Scottish English speakers in their sample used both “tip-up” and bunched /r/ variants in a largely systemic way, with tip-raised onsets predicting bunched codas. Despite the fact that some speakers in this study could be described as predominantly non-rhotic, all the speakers in the sample displayed a degree of variability; therefore, the aim was to what establish to whether the quality of the preceding /r/, as described by one of the categories employed in this study, can indeed predict the quality of the following post-vocalic /r/.

As described in the Methodology chapter, all tokens with priming /r/ prevocalic /r/were divided into five categories: A - E (see section 3.7.2.3). Spearman's rho non-parametric test was employed to establish the strength of association between priming /r/ realisations and the following, postvocalic /r/ realisations within respective word category. The results are presented in Table 23:

Table 23

Spearman's Rho Correlation Coefficients for the Preceding /r/ and the Following Non-Prevocalic /r/

		Correlation Coefficient														
		Foll. r.A. 1s	Foll. r.A. 2s	Foll. r.A. 3s	Foll. r.B.1 s	Foll. r.B.2 s	Foll. r.B.3 s	Foll. r.C. 1s	Foll. r.C. 2s	Foll. r.C. 3s	Foll. r.D. 1s	Foll. r.D. 2s	Foll. r.D. 3s	Foll. r.E.1 s	Foll. r.E.2 s	Foll. r.E.3 s
Spearman's rho	Prec. r.A.2 s	-0.034	.549**	0.381	-0.056	.394*	-0.374	0.150	0.117	-0.222	0.083	0.134	-.496**	0.103	0.172	-.390*
	Prec. r.A.3 s	-0.027	-.421*	.682**	0.084	-.414*	.407*	0.047	-0.166	0.070	0.111	-0.226	.393*	0.133	-0.353	0.330
	Prec. r.B.2	-0.053	.423*	0.324	0.029	.457*	-.429*	0.286	-0.033	-0.310	0.222	-0.111	-.491*	0.181	0.092	-.526**

s															
Prec. r.B.3 s	.387	0.015	.433*	.268	.113	.676**	.511**	0.275	.503**	.526**	0.362	.697**	-.487*	0.186	.522**
Prec. r.C.2 s	.603**	.267	.300	.689**	.286	.685**	.563**	.345	.273	.749**	.608**	.588**	.737**	.562**	.518**
Prec. r.C.3 s	.340	.123	.555**	.319	.141	.697**	.537**	0.302	.532**	.553**	0.332	.762**	.524**	0.234	.662**
Prec. r.C.4 s	.236	.098	0.322	.194	.116	.518**	-.444*	0.087	.530**	-.407*	.058	.735**	.366	0.000	.545**
Prec. r.D.2 s	0.234	0.187	-.439*	0.145	0.046	.357	0.316	.193	.299	0.198	0.086	.310	0.202	0.011	.355
Prec. r.D.3 s	.129	.301	.482*	.159	.168	.413*	.295	0.170	0.256	.314	0.139	.496**	.208	.062	.521**
Prec. r.E.1 s	.718**	-.449*	.267	.635**	-.413*	-.493*	.884**	.708**	.665**	.852**	.614**	-.455*	.876**	.697**	.520**
Prec. r.E.2 s	.515**	.690**	.046	.384	.567**	0.033	.527**	.687**	0.222	-.460*	.554**	.188	.532**	.690**	0.060
Prec. r.E.3 s	.347	.011	0.377	.316	.062	.709**	.544**	0.318	.470*	.635**	.417*	.644**	.541**	0.247	.590**
Prec. r.E.4 s	.163	.189	.531**	.269	.240	.408*	.308	.027	0.383	.282	.040	.531**	.187	.147	.393*

Note. Relevant sections presented in coloured boxes. Category four tokens (trills) presented only for the contexts where data was available. **, Correlation is significant at the 0.01 level (2-tailed).

Categories A, B, C and D all comprised words with a preceding prevocalic /r/, while category E contained words with a preceding post-vocalic /r/ in the preceding syllable, e.g. “server”.

In categories A (RVr words, such as “rear”) and B (RVr words, such as “carer”), where the two /r/s are separated by only one vowel segment, the use of category two (approximants) for the preceding /r/ is correlated with the use of the same category for the following non-prevocalic /r/ (p= 0.55** for A and 0.46* for B, significant at the 0.01 and 0.05 level respectively). However, the same relationship between the use of approximants for both /r/s is not observed for category C (RV'CVr words, such as “repair”) or D words (RVCVr words, such as “Roger”), where the two /r/s are in two different syllables and are separated by more segments. This provides further support for the “lagging rhoticity” explanation discussed above in the context of multiple regression analysis results: it seems that long term articulatory settings for approximant /r/ are indeed more likely to remain in place when both the preceding prevocalic /r/ and the following non-prevocalic /r/ are separated by a single vowel rather by several segments.

The use of category three variants (taps and tap-like realisations) for the preceding prevocalic /r/ is positively correlated with the use of the same variant for the following /r/ in all five

word categories (A, B, C, D, E: $\rho = 0.68^{**}$, $\rho = 0.68^{**}$, $\rho = 0.53^{**}$, $\rho = 0.50^{**}$, $\rho = 0.59^{**}$ respectively, all significant at the 0.05 level). This means that if a speaker employs a tap-like variant (category three) for the prevocalic /r/, they are more likely to use the same category again for the following /r/ regardless of the different phonetic constraints, as represented by the four categories of words (A-E), which may suggest that, unlike the use of category two variants (approximants), the use of tap-like variants for the following /r/ is not so much a product of coarticulation effects triggered by the priming /r/, but is governed by other internal constraints, such as the presence of a following consonant, and/or social and acquisitional factors.

The use of trills and trilled approximants (category four) was only included in category C and E words; since few trills were produced by the participants, statistical analysis of trills was not possible for every word category. Nevertheless, the analysis of category C words shows that if a trill is produced for the preceding prevocalic /r/, the following /r/ is more likely to be articulated as a tap or a tap-like variant (category three): $\rho = 0.53^{**}$ for category C and $\rho = 0.393^*$ for category E, significant at the 0.01 and the 0.05 level respectively. This mirrors the relationship between those two /r/ variants discussed in section 4.3.5; the more Polish speakers of L2 English use trills and trilled fricatives, the more likely they are to produce taps and tap-like variants. Again, this could perhaps be explained by the phonetic instability of the trill (see section 2.2.2.1) as well as perhaps social or acquisitional factors; once a speaker has “allowed” the transfer of L1-like categories (three or four) into their L2 English, more L1 variants are likely to be employed.

The main objective behind including category E ('VRCVr) words, i.e. words with a preceding postvocalic /r/, was to establish whether the choice of a non-rhotic variant for the preceding /r/ could predict non-rhoticity in the following non-prevocalic /r/. Indeed, the analysis has revealed a statistically significant correlation between the choice of category one (on-rhotic) variants and the same category use for the following /r/ ($\rho = 0.88^{**}$, significant at the 0.01 level), with the former being also negatively correlated with the use of rhotic variants, i.e. categories two and three. Similarly, the use of category two (approximants, offglides, /r/-coloured vowels) for the preceding postvocalic /r/ was positively correlated with the use of the same category for the following /r/ ($\rho = 0.69^{**}$, significant at the 0.01 level), as well as negatively correlated with the use of non-rhotic, category one, variants ($\rho = -0.53^{**}$ significant at the 0.01 level). In other words, those speakers who employ a non-rhotic variant for the preceding /r/ are more likely to produce another non-rhotic variant for the following

/r/, while those participants who employ approximants, offglides or /r/-coloured vowels are also likely to do so for the following /r/.

This means that the most frequent patterns are either consistently rhotic (e.g. ['sɜːrvəɪ] for “server”) or consistently non-rhotic realisation (e.g. ['sɜːvə]), while rhotic + non-rhotic ['sɜːrvə] and non-rhotic + rhotic ['sɜːvəɪ] combinations are less frequent. While this could perhaps again be explained by “lingering” rhoticity or lack thereof, it is also possible that the relationship is the result of acquisitional or social rather than the influence of the preceding /r/ variant: those participants who have productive control over /r/ variants and choose to employ or avoid a specific variant for possible social reasons, seem to be consistent in their choices within a word. The social meanings behind the different /r/ variants will be discussed in the following part of this chapter.

4.5.2.5 Section Summary

As expected, it is not a single predictor but rather the combined effect of various internal constraints that contributes to variability in non-prevocalic /r/ realisations in the L2 speech of Polish speaker of L2 English. The models analysed using multiple regressions with bootstrapping all accounted for less than about 38% of variance, which means that other variables, not included in the models presented above, also govern speakers choices of /r/ variants.

However, the results do reveal several predictors, such as the impact of preceding vowels, the place of articulation of the consonant in the onset and in the coda and the presence of a preceding /r/. More specifically, the category of Polish-like rhotic variants, i.e. taps and lenited taps, was only predicted by two independent variables, the strongest one being the presence of a coda that involves the apex, blade or the front of the tongue as the active articulator. The use of rhotic English-like variants and the use of non-rhotic variants were correlated with a larger number of variables, the strongest predictors being the presence of NORTH vowel (a negative predictor) and the presence of a dental/alveolar/post-alveolar consonant in the syllable onset respectively. While it is not possible to establish the nature of these relationships with absolute certainty, the section above has attempted to offer potential explanations based on the phonological differences between the speakers L1 and L2, linguistic transfer and ease of articulation. Nonetheless, it is clear that while a part of L2 variation can be attributed to the speakers’ acquisitional trajectories as well as internal constraints, these do not fully account for the participants linguistic choices, which are also

likely to be affected by the speakers' beliefs about language, especially the indexical meaning that at least some of the /r/ variants seem to be imbued with. The following section of this chapters examines some of those beliefs and indexical meanings behind the variable and uses them to contextualise the findings of the quantitative analysis presented above.

4.6 Indexicality and /r/ Realisations

As discussed at the beginning of this chapter, the style shifts represented by different /r/-fullness index values for the WL and FS data are most likely a function of word familiarity and the impact of spelling; nevertheless, they could also be regarded as tentative evidence of indexical value linked to the various /r/ realisations. Linguistic indices which are prone to style shifts are referred to by Labov (1972) as “markers”; these display stylistic stratification as a result of being linked to the ideology of “correctness”. In other words, since speakers are conscious of their social meaning, they select the desired variant depending on their social situation as well as the amount of attention paid to speech. Since the data in this study clearly demonstrate style shifts between the WL and the FS tasks, it could be argued that, at least for some participants of the current study, non-prevocalic /r/ variants are indeed imbued with some social meaning, and possibly function as markers or, in Silverstein's terms, “n + 1-st indexicality” (Silverstein, 2003).

As Johnstone et al. (2006) point out, although members of a speech community respond to social meanings and employ specific linguistic forms to index those meanings, they do not necessarily possess conscious awareness of the links between the forms and their indexical meanings. Therefore, the following section presents and discusses the qualitative data obtained in the semi-structured interviews (which is also presented in full in Appendix III) in order to explore the indexical meanings that the participants might attach to the non-prevocalic /r/ variants as well as to look for evidence of the participants' metalinguistic awareness, i.e. awareness of the links between that linguistic variable and its social meanings (RQs 5 and 5a).

4.6.1 Accent as a Cue to Recognising Polish Migrants

In response to question two, which was “When talking to a stranger e.g. in a shop, can you tell if they are from Poland? How?”, 22 out of 26 participants mentioned stereotypes regarding Polish migrants' physical characteristics, style and behaviour. Three out of those 22, P08KA, P11BM2 and P13NE, focused solely on those “visible” stereotypes, while the

remaining 19 also discussed other themes, with the key theme emerging in responses to this question being “accent”.

In total, 23 out of 26 participants explicitly mentioned the word “accent” in their responses to question two, mostly in reference to Polish-accented English, such as “Eastern European” or “Slavic” accents, as well as when discussing “native” English. Moreover, “accent” was again mentioned by 15 participants in response to question three, i.e. “When talking to a stranger e.g. in a shop, are you instantly recognised as Polish? Why?”. For example, P10KS’s answer to question one, which was fairly representative of the dominant view, was as follows: “[I can recognise people from Poland] in 90% of cases; normally by the looks, as we look similar to each other in terms of our facial features, and also, instantly, by the accent. [The latter is true] especially [for] those who don't have a well-rehearsed English accent”. Similarly, P05ZH claimed to be able to recognise fellow Poles “very often”, and that to her, the clues were “Slavic facial features”, as well as “the accent”.

When the participants were asked to elaborate on what they meant by “accent”, they provided responses which combined provide an insight into in-group beliefs about Polish-accented English as well as “native” English. It should also be pointed out that while most participants used terms “the accent” or “the Polish accent”, some used broader terms, such as “East-European accent” or “Slavic accent”.

When explaining what they meant by “the accent”, the participants used the following adjectives to describe Polish-accented English: “hard/harsh” (N=13), “square” (N=8), “sharp” (N=1), “flat-sounding (N=1), “guttural” (N=1) and even “aggressive” (N=1). For example, P02PD “I can quickly recognise Poles by the accent, it sounds ‘square’ - some words are ‘hard’, they don't sound ‘soft’; they sound like when they [Polish people] speak Polish”. Similarly, P25SM said: “I call that ‘Polglish’ - we have a hard, Slavic accent. It's this peculiar tone”. In addition, according to some participants, this “particular tone” was related to low proficiency in English, for example, P03MG said: “I may not be able to identify someone as [Polish] unless they really butcher English and sound really ‘square’”.

Since that part of the interview was conducted in Polish, it should be emphasised that the adjectives listed are the researcher’s translations of Polish words, and while an effort was made to find the most accurate English equivalents, the exact connotations or polysemic relationships are not always identical in the two languages. One notable case is the Polish adjective “kwadratowy” (“square”): according to on-line sources on Polish slang, e.g.

Slang.pl (*SLANG.pl*, 2022), the word “kwadrat” (a square) or “kwadratowy” (square) can also refer to “a thug”, with examples including the phrase “modelowy kwadrat w dresach”, meaning “a typical thug in a tracksuit”. While it is not suggested here that the meaning of a thug was deliberately evoked by the participants of the study in the context of Polish-accented English, the connection is relevant for this discussion, as will be explained at a later stage.

In the interview data, the Polish or “East-European” accent was often contrasted with “native” or “the English accent”, which was described as “soft” (N=5), “smooth” (N=1), “fluid” (1), and “deep-sounding” (as opposed to “flat-sounding”) (N=1). Some participants felt even more positive towards English, for example P07ZA said: “English sounds are kind of ‘sexy’. Take German as an example: it does not sound attractive to me at all, everything is ‘hard’ and ‘cold’... But English is fluid, it is pleasant”.

It needs to be pointed out that, although having such a negative attitude towards Polish-accented English and a positive one towards native English was the prevalent stance, there were some exceptions. For example, P04BK expressed a positive attitude towards non-native English pronunciation, saying: “This kind of foreign English is clear and comprehensible [laughs]; “real” English people lisp and swallow sounds, like when they say /həʊ ‘ɑ: jə/ (‘How are you’). Similarly, P22SJ commented that when she hears Polish people speak English, “it is easier to understand than native English: we separate words”. Interestingly, the two participants who expressed a more positive attitude Polish-accented English, 04BK and 22SJ, had the lowest level of proficiency in English out of the whole cohort.

Another participant, P08KA, said that there were certain native accents of English which also sounded unpleasant to her, but pointed out that she did not perceive GB as one such accent: “When I came over, I started listening to BBC Radio. I would also watch EastEnders in order to be able to understand ‘regular’ English people ... but this accent irritates me - it sounds aggressive to me. This is to do with my personality - I don't like aggressive accents, ... but I do like the typical ‘BBC accent’”.

Nevertheless, despite these exceptions, the imagery associated with Polish on the whole evoked in comparison with English a certain roughness, a degree of unpleasantness, or perhaps even aggressiveness. On the other hand, descriptions of “the English accent”, i.e. GB, seems to be much more positive, evoking images of gentleness and pleasantness.

4.6.2 Beliefs Regarding Features of Polish-accented English

When requested to provide a further explanation of what they meant by the “hardness” or “harshness” of Polish-accented English, or to provide a specific example to illustrate the qualities they mentioned, the participants mentioned a range of phenomena, some of which were not strictly related to “accent” as understood within sociophonetics, but which nonetheless provide an insight into their beliefs about how Polish migrants speak English. Several participants mentioned cues such as grammatical mistakes or the way “they [Polish people] build sentences” (P02PD and P05ZH). Two participants mentioned the use of slang, and seemed to hint at the use of weak forms by native speakers: for example, according to P21KP, “the locals shorten words and use slang”; similarly, SP01PA stated: “We don't use slang or contractions; we use more formal language, which may seem artificial to native speakers.”

Several participants referred to intonation as well as lexical or sentence stress. For example, P21KP stated that “the melody of language, for example, how we ask questions, is different”. Similarly, P12NT said: “Intonation is different- the whole accent [is different]. Also word stress is different - different parts of word are stressed.” P02PD observed: “There is no ‘softening’; It's like they [Polish people] stress individual words”, while P05ZH claimed that she was able to recognise a Polish accent “also by [word] stress - they {Poles} put stress at the end of the word, not the beginning. Also the melody of language [is different]”.

Several participants referred to differences in the articulation of consonants. Plosives were mentioned by three participants: P04BK stated that Polish people “pronounce ‘hard’ letters, such as /t/”, while P07ZA, one of the three participants with phonetic training, explicitly mentioned “Polish sounds, Polish /t/” as a clue, explaining that the way it is pronounced by some Polish migrants is what she meant by “flat sounds”. Another participant, P06MP, when talking about his wife’s “hard” accent, observed that she “doesn’t phonetically soften sounds; you can clearly hear /k/, /g/ - a typical Polish accent”. Fricatives were also mentioned twice: P10KS said: “we cannot ‘soften’ words in English: the way we pronounce word endings sounds ‘hard’”, and provided the example of the word “sixth”, with the word-final <th> pronounced as /t/; P16MK commented: “By ‘accent’ I mean a hard accent; all those [v], [ʒ] sounds... It's heavier, harder to pronounce.”

Other salient features of Polish-accented English included vowels, connected speech processes and less specific descriptions. Vowels were only explicitly referred to once, by the

phonetically-trained P07ZA, who said that some Polish people “cannot differentiate vowel length, for example, between /ɑ:/ and /æ/,” and added that “English vowels sound ‘deeper’”. Comments from P10KS and P25SM could be interpreted as references to elision: “word endings - Polish people pronounce words until the very end” (P10KS); “we cannot “soften” words in English - the way we pronounce word endings sounds ‘hard’”; while a comment from P07ZA possibly refers to linking strategies: “English is a fast language, and its sounds are joined together. But she [P07ZA’s Polish neighbour] does it in a different way [from native speakers of English].” Finally, some participants provided more general descriptions, with one of the more interesting ones being one by P01PA, who said: “We form longer sentences and it takes us longer to articulate them. Our tongues are not efficient/fast enough in English [as they are in Polish] to articulate things quickly - unless someone has studied English for long enough”.

4.6.3 Beliefs Regarding /r/ Variants as a Feature of Polish-accented English

Although, as discussed in the previous section, the participants provided quite a wide range of characteristics which they believed were key features of Polish-accented English, the most widely referred to feature by far was the quality of /r/. When explaining what they meant by the “harsh” quality of the Polish accent, ten participants almost instantly explicitly mentioned the way Poles pronounce the sound /r/, while four others did so indirectly, usually by providing an example word with a clearly articulated, often even exaggerated, [r] or [r̥]. All the relevant comments are presented in Table 24.

Table 24

Participants' Comments Regarding /r/ Realisations in Polish Speakers' L2 English

Participant	Reference to /r/	Direct or Indirect
P03GM	“If they [Polish migrants] speak [English] fluently, I may not be able to identify them as [Polish] unless they really butcher English and sound really ‘square’, with a very strong /r/ - like ‘I am Russian’ [pronounces ‘Russian’ with a hyper-articulated [r]].”	Direct/Indirect
	“I have a friend at work who cannot say ‘thirteen’, so she uses /t/ - ‘thirteen’ or ‘three’ [pronounces with a /t/ and a tapped [r]].”	

	<p>“My oldest brother [who lives in Poland] has a very strong /r/ in English, even stronger than in Polish – ‘good morning’, ‘how are you’ [pronounces the phrases using a trill: [r]]. I remember that he introduced himself that way to my [English] boyfriend, and the way he said it struck even me. We still laugh at him about it. I'd never heard anyone our age speak English like that – I'd say he speaks English the way our parents' generation did - the way they spoke English sounded very hard, and so does my oldest brother. . . My other brother or his wife don't have that [r]. There was an older lady I used to work with, she was 60+, and she could barely speak English [she spoke like that too].”</p>	
P04BK	<p>“Polish people . . . pronounce "hard" letters [sounds], e.g. . . . /r/ - you can sense that even if they speak English.”</p>	Direct
P05ZH	<p>“Sometimes I can tell by accent: rolling the /r/ - as in ‘brother’, ‘water’ [pronounced both words with taps –[r]].”</p>	Direct
P06MP	<p>“The Polish accent in English is ‘hard’. There are people who speak English well, but you can still hear the accent, . . . for example, ‘thirty’ [‘ferti].”</p> <p>“[My wife] doesn't . . . pronounce words the English way, e.g. ‘where’, ‘there’ [produces rhotic, heavily /r/-coloured realisations of both post-vocalic /r/s mimicking an American-sounding accent].”</p>	Indirect
P07ZA	<p>“Some Poles also speak really slowly - "How are you? Are you OK today? [produces both ‘are’ and ‘you’ with tapped [r]s].”</p>	Indirect
P09BM1	<p>Pronounced his name, “Beniamin Marczak” as [bɛ̃ɲamĩn martʂak] - with an hyper-articulated trilled [r].</p>	Indirect
P12NT	<p>“Once I've heard them speak, I can tell by their accent - e.g. "Hello, can I buy this water, please" [pronounces with a Polish accent and a tapped [r] in ‘water’].”</p> <p>“/r/ is extremely characteristic [produces an exaggerated, very long trilled.]”</p> <p>“Some people, are sort of careless about English - e.g. my manager: he uses fancy words, but he sounds kind of "crude" - his vocabulary and grammar are</p>	Indirect/Direct

	impressive, but his accent is not - he uses that bloody /r/ [produces [r]].”	
P15RK	“There are ‘hard sounds’ - such as /r/; most people say [r] [produces a Polish tap].”	Direct
P17SP	“Polish accent is ‘hard’: how we pronounce /r/ - it's not as hard as in Russian (theirs sounds even harder), but our accent is still sounds ‘hard’ - although this is changing.”	Direct
P21KP	“By accent I mean how they pronounce /r/, also spelling pronunciation: [ˈkɔvɛr] instead of /ˈkʌvə/ <cover>.”	Direct
P22SJ	“We emphasise /r/s more than the English [produces a tap: [r]].”	Direct
P23GD	“Our /r/ is not as soft as the /r/ in English, but it is not as hard as the Russian one” <produces words "are" and "very" with clearly trilled [r]s as examples>. That is one of the tell-tale signs [of being Eastern European], at least for me.”	Direct
P25SM	“You can particularly hear the difference when it comes to hard letters, e.g. a strong /r/ [as an example, produces the word ‘Roberta’ with two clear taps [r]]. Even in ‘Rob’ the initial /r/ is not as hard as in Polish. Our accent is sharper compared to the English one.”	Direct
P26NM	“The way Polish people pronounce ‘Leicester’ [leɪtʃɛstɛr] [mimics that pronunciation with a clearly tapped final [r]] or ‘Edinburgh’ [uses the Polish pronunciation [ˈɛdɪnbʊrk], with a strongly trilled [r]] is a good test for where someone is from.”	Indirect

All the comments presented above clearly that /r/ is regarded as a salient feature of the L2 English of Poles or, more broadly, Eastern Europeans living in England, as some participants admitted that sometimes they find it hard to differentiate between their fellow migrants from Poland and immigrants from other parts of Central and Eastern Europe.

It needs to be pointed out that some participants emphasised their awareness of the fact that not all Polish migrants’ speech shared the characteristics discussed above; for example, P15RK stated: “We have a fairly characteristic accent, although not all of us; some people speak with a really nice, ‘pure’ English accent. I am not sure why... Perhaps they've been

here for a while, or perhaps it's their 'superpower' - I cannot do that [speak with a native-like accent], for example.” Another participant, P14JM, having discussed some of the existing stereotypes, added: “But I also have Polish friends who do not sound Polish at all ... I think it depends on how much effort you put into adjusting your accent, to learn the English accent.”

Moreover, a few participants also pointed out that the situation was changing; for example, P17SP stated that “Polish people now have better accents and speak better English, so that cues are harder to find”. A similar sentiment was reflected by P04BK, who noted that “recognising Poles used to be easier; the new arrivals, within the last three years, sound more like the English”. Similarly, P03GM, a female in her late thirties, stated that she was aware of “an age difference between us [her peers] and [younger] people born after 1989; generally, they have much better English than older Poles.” P03GM attributed this difference to younger migrants' more integrative motivation: “I guess this is because they came over because they wanted to, because they were curious, they had some friends over here, or it was trendy. We came here because we sort of had to - nobody really wanted to.”

Overall, the data show that most of the participants had a strong awareness of the various speech characteristics associated with the way Polish migrants in England speak English, with the various /r/ realisations emerging as the main cue. It is this awareness, as well as the results of the statistical analysis that demonstrate that /r/ is prone to style shifts, which in turn provide strong foundations for the emergence of higher-order indexical meanings behind /r/ realisations.

4.6.4 “Polish to the bone” and “I don't always need to be this ‘Marrczak’”: Indexical Meanings of /r/ in Polish-accented English

4.6.4.1 First-order Indexicality

Johnstone and Kiesling (2008) argue that indexical meanings vary within the speech community; they point out that while it is possible to identify repeated semiotic relationships between social meanings and linguistic forms, their interpretations by individual members of that community may vary, as, ultimately, it is people's individual experiences that lead to the emergence of indexical meanings. The results of this study demonstrate that indeed there is no single social meaning attached to a single linguistic form; instead, the meanings attached to /r/ variants constitute a whole gamut of potential meanings, or what (Eckert, 2008) terms

“an indexical field, or constellation of ideologically related meanings”(p. 454). It is this constellation of meanings that will be explored in this section.

Two out of five participants who produced significantly higher rates of taps than 21 other participants and received the two highest scores on the AAFS /r/-fullness index, 01PA and P19MI, did not mention either [ɹ] or [r] as a clue to recognising fellow Polish migrants when they interact in English. This lack of awareness, combined with the heavy use of [ɹ] by both of these participants, and with some use of [r] by the latter participant, suggests that, at least for these two individuals, /r/ realisations are simply first-order indices (Johnstone, 2009; Johnstone & Kiesling, 2008; Silverstein, 2003), or what Labov (1972) termed “indicators”, i.e. merely indicate the speaker’s origin and language background. This is consistent with Zuengler (1991), who points out that in second language performance, variability can be the result of the speakers’ acquisitional trajectories rather than of social conditioning. Similarly, Johnstone et al. (2006) report that one of their participants in their study of the “Pittsburghese” dialect employed /aʊ/ monophthongisation simply because he lacked the productive control over the choice of variants as well as any metalinguistic awareness of those. Since the feature was not controllably variable in his productive repertoire, it did not convey second-order lexical meaning, but was simply used “because he [was], in a demographic sense, from the region” (Johnstone et al., 2006, pp. 90-91). Although all the participants in this study demonstrated variability as well as stylistic shifts in their non-prevocalic /r/ realisations, some participants’ lack of metalinguistic awareness suggests that, at least for those individuals, the use of taps and tap-like variants -- i.e. lenited taps -- is simply an indicator, or a first-order indexical: a characteristic transferred from their L1.

4.6.4.2 Second- And Third-Order Indexical Meanings: Being from Poland, Alignment with Poland, Foreignness

Nevertheless, once speakers become aware of a linguistic feature and its link to a belief or a certain ideology, such as correctness ideology, indicators become markers (Labov, 1972), or “n + 1-st order indices (Silverstein, 2003). These, in turn, may become filtered through ideologies of dialect and identity (Johnstone et al., 2006), assigned new meanings, and thus become available for third-order indexing. In the case of most participants in this study, [ɹ] and [r] were linked to the concept of a Polish accent, but also, at a more abstract level, alignment with Poland, or Eastern Europe. It is important to point out here that while most participants’ responses focused specifically on Poles, as requested in interview questions, some answers contained references to migrants from other Central and Eastern European

countries, or even to shared “Slavic” or “East European” characteristics. For example, P225SM referred to a “hard Slavic accent”, while P05 ZH discussed “Slavic facial features”. P14JM admitted that he was able to recognise some migrants as Eastern Europeans “rather than specifically Polish”, while P01PA stated that she was usually able to recognise migrants from Poland by their accent, but that she sometimes confused them with Romanians or Russians. Therefore, it could be assumed that, at least in some cases, alignment to Poland could be regarded as linked to alignment with the wider region of Eastern Europe.

An example of a participant who seemed to feel particularly aligned to his country of origin and his L1 language community was P04BK. P04BK was a 40-year-old male who during the interview demonstrated not only some metalinguistic awareness linked to /r/ realisations, but also a positive attitude towards Polish-accented English. P04BK also produced the third-highest ratio of tap-like variants. When talking about the more recent arrivals from Poland, the participant said: “They come here with good English, they hang out with English people and they kind of join their side.” It is the use of the phrase “join their side” that is key here, as it is indicative of the practice of “othering” as well as of P04BK’s alignment with his Polish compatriots and/or his homeland. Therefore, it seems that for participants like P04BK, /r/ realisations functioned as second-order indexicals (Johnstone, 2009) or markers (Labov, 1972): they noticed them and attributed social meaning to those variants, linking them to sounding “Polish” or “East European”. However, there is also some evidence that /r/ variants were linked to higher order indexical work.

According to Johnstone (2009), once members of the speech community become conscious of second-order indices and link them with a particular identity, those second-order indices become “(n +1)+1-th-order” (Silverstein, 2003), or third-order indexicals and become available to project different personas (Johnstone & Kiesling, 2008). In Labov’s (1972) model, a distinguishing feature of such third-order indices, or stereotypes, is that they are either stigmatised or enjoy varying degrees of prestige (Labov, 1972, p. 314). It is this strong attitudinal response triggered by them that distinguishes them from markers. Moreover, according to (Labov, 1972), these indices are the object of meta-discourse, as members of the speech community not only display high awareness stereotypes but also actively discuss them, and may even refer to them using labels and phrases. The data collected for the current study presented clear evidence not only of high awareness of the variable, but also strong attitudinal responses it triggered; there was also some evidence of labels a few participants attached to it.

One of the participants whose answers were particularly focused on /r/ variants was P03GM, a female in her late thirties with an English boyfriend. P03GM had two older brothers living in Poland, and while she claimed to have a close relationship with the younger of her siblings, she also admitted relative emotional distance from the older one. In the interview, she said: “My oldest brother [who lives in Poland] has a very strong /r/ in English, even stronger than in Polish: for example, ‘good morning’, ‘how are you’ [mimicking her brother, using [r] in both phrases]. I remember he introduced himself that way to my [English] boyfriend, and the way he said it was striking, even for me. We still laugh at him about it. I’d never heard anyone our age speak English like that – I’d say he speaks English the way our parents’ generation did - the way they spoke English sounded very hard, and so does my oldest brother. A complete lack of familiarity with the spoken form of the language - our generation heard English in songs: he [the oldest brother] didn’t listen to [English] music - he’s just so Polish to the bone. So he knows the spelling, knows how to say that, but he says it his way. My other brother or his wife don’t have that kind of /r/.”

P03GM’s comments clearly demonstrate a strong affective response to [r], as evident in the phrase “we still laugh at him about it”, where the use of the pronoun “we” aligns P03GM with her English partner. Moreover, she admits her oldest brother is aware of the way /r/ is pronounced in English (“he knows how to say that”), but, according to her, “he still says it his own way”, which P03GM attributes not only to his lack of exposure, but also to his cultural alignment: according to her, her brother refused to listen to music with English-language lyrics, unlike his peers. P03GM finally summarises his attitude by saying “he’s just so Polish to the bone”. It is also meaningful that she contrasts her oldest brother’s way of pronouncing /r/ with the way her other brother - the one she considered herself much emotionally closer to - spoke English, aligning herself with her less [r]-ful sibling and her English boyfriend, and distancing herself from her “Polish-to-the-bone” brother. It is also worth pointing out that in her own WL and FS performance P03GM only used category one (non-rhotic) as well as category two (approximants, offglides, /r/-coloured vowels) non-prevocalic /r/ variants, and 0% of category three (L1-like taps and lenited taps) or four (trills) realisations.

Another participant who provided clear evidence not only for his awareness of the variable, but also of a strong attitudinal response to it, was P12NT. P12NT was a male in his early thirties who worked as an IT specialist. In his answer to question four, while discussing the different attitudes people in his social networks had to speaking English, he mentioned his manager, who was also from Poland: “Some people are sort of careless about English. For

example, my manager: he uses fancy words, but he sounds kind of ‘crude’... His vocabulary and grammar are impressive, but his accent is not - he uses that bloody [r] [produced a clearly articulated trill]. His wife is Polish, and his son doesn't speak English at all.”

It is the phrase “that bloody [r]” that is particularly noteworthy, as it seems to express P12NTs’s particular awareness of the variable, as well as his exasperation or even embarrassment with the “crudeness” of such a “careless” attitude to English pronunciation. P12NT’s mention of the fact that his manager’s son did not “speak English at all”, despite the whole family living in England, points to the association between a strong Polish accent, trilled [r], and the alignment with Poland/the Polish language, as well as a lack of willingness to integrate in England.

This link between professed attitudes about cultural alignment and the adoption of L2 phonetic features has been previously reported in literature; for example, Sharma (2005) observed a correspondence between the degree of adoption of rhoticity, along with other American English accent features, and the attitudinal stances of first generation migrants from India living in the USA. In this study, the alignment with Poland and the resulting unwillingness to integrate or improve English language proficiency was mentioned by several participants, particularly when talking about other Polish migrants in response to interview question four: “What do you think of how Polish people living in the UK speak English?” For example, P20JL stated: “How Polish people speak English depends on their motivation; those who only want to make some money and go back to Poland don't care in my opinion.” A similar view was expressed by P26NM, who stated: “Those people who work at building sites and such - their English is non-existent and they have no motivation ... Polish people often form ghettos and don't even try to learn English. But there are also Poles who are more open minded and they have good English.” P09BM1 shared a similar opinion, saying: “The most important thing is that those people [Polish people with ‘hard’ accents] seem not to care about how they speak - they only want to be able to communicate, they don't want to integrate... I can understand it a bit, with Brexit and all, but not all of us have had negative experiences - you need to open up your mind, and things get easier then...”

It was this last participant, P09BM1, who provided perhaps the most powerful example of how [r] can function not only as an index of a person’s alignment with Poland and the Polish community, but also as an unwelcome index of foreignness. P09MB1, or Benjamin Marczak (pseudonym), was a 36-year-old male who had dedicated a considerable amount of effort to

improving his English and who repeatedly stressed the importance of integration into British society, which, as evident from the quotation included above, he equated with having an “open mind”. During the Free Speech task he described an incident with an English ex-colleague and mentioned how disappointed he felt when that colleague, who he had trusted and considered a friend, told him that "England will never be your home". After the recording of the interview had stopped, on the way out of the building, Benjamin kept talking to the interviewer about his current work environment. He mentioned that his colleagues often called him by the English version of his name, i.e. ['bɛndʒəmɪn], rather than the Polish one, [bɛɲ'amɪn]. When the researcher asked him how he felt about that, he responded that he did not mind at all, as he regarded that as a sign of respect and acceptance. Then, as if lead by a sudden burst of emotion, he added, “I actually prefer that. I don’t always need to be this... Marczak!", pronouncing his own surname ['martsək] with an hyper-articulated, trilled [r/], as if his Polish surname, especially the [r] in it, signified his “Polishness” and, at the same time, his foreignness: an obstacle to him truly being accepted in the UK.

4.6.4.3 A “Square” Accent of “Square” People - Thugs and Aggressiveness as Examples of Negative In-group Stereotypes of Polish Migrants

The “hard” /r/, which many participants mentioned as the most salient characteristic of Polish-accented English, was the most common linguistic stereotype found in the interview data. However, one other particular in-group stereotype emerged during data analysis, namely that of a cocky, swearing, tracksuit-wearing, gym-going, bald Eastern-European thug. Although it seems to be more of a visual, or perhaps cultural stereotype, and as such not of immediate relevance to the remit of this study, there seems to be a connection between it and the linguistic stereotype, which will be discussed in this section.

While some participants emphasised the fact that Polish migrants did differ from one another, the image of an Eastern European/Polish thug was perhaps the most frequently mentioned visual stereotype, both by male and female participants. For example, P12NT, a male in his thirties working as an IT specialist, said: “I can often tell Poles apart by their appearance: by their white socks, tracksuits, trainers and the way they act... Like ‘You’ve got a problem?’ [mimics a cocky, slightly aggressive attitude]. Once I’ve heard them speak, I can tell by their accent - e.g. ‘Hello, can I buy this water, please’ [pronounces with a Polish accent and a tap

[r]]. Actually, usually there is no ‘please’... I back out when I see people like that - we [P12NT and his wife] don't want to have anything to do with them.”

Similarly, P06MP, a tall male with a shaved head, admitted he was conscious of the stereotype he partially fitted himself: “I am big and bald [laughs]. This is a thing - I can feel this; when I go shopping, I can see people don't feel comfortable around me... A lot of us Polish men are big and bald”. P11BM2, a twenty-five year old warehouse worker also provided a similar description of his male compatriots, saying “[Polish men have] shaved heads and wear tracksuits”, while P14JM, a male psychology teacher in his late thirties, echoed this, saying “they have the stereotypical closely-cropped hair, wear trainers and tracksuits; these people can be recognised as ‘Eastern European’”. Some female participants also shared this stereotype; for example, P03GM stated: “I can also tell Eastern European men by their looks. . . . They don't have regular features, are often bald, have floppy ears. Not all of them, of course, but quite a few.” She added: “Polish men . . . seem insecure ... and they try to cover it up with cockiness.” P13NE claimed that she could recognise Polish men by their style: “Polish men have this horrible, peculiar walk - some [Polish] men, obviously: kind of bouncy... and that horrible style: tracksuits, hoodies. They swear a lot”.

Swearing was also a relatively common theme, as six participants mentioned swearwords as a clue to recognising mostly male migrants from Poland; for example, P22SJ, a 40-year-old female claimed to be able to recognise Polish men more than women because the former swear “even if they speak English”. This sentiment was reflected by e.g. P11BM2, a 25-year-old warehouse operative, who claimed to deliberately avoid such behaviour: “I try not to act like a stereotypical Pole: ostentatiously drinking alcohol in public, drinking a lot of alcohol and swearing a lot. Very often Polish men are associated with the K-word [“kurwa”, i.e. “a bitch”]. . . . Polish swearwords . . . sound aggressive because of the “heavy” [r].”

Although the exact characteristics of the Polish thug provided during the interviews somewhat differed among the participants, it is clear that many shared the negative stereotype of a bald Eastern European in a tracksuit, one who is rough, rude, or even aggressive, one who frequently swears, in a “hard” accent, particularly using words with the “heavy” Polish [r]. It is hardly a coincidence that the word commonly used in this study to describe Polish-accented English was the same as the Polish slang word for “a thug”: “kwadratowy” (*SLANG.pl*, 2022). Although this connection was perhaps not something the participants had intended or indeed were aware of, it seems that both the linguistic variable and those who

used it were associated with “roughness”, “toughness”, or even aggressiveness. It seems that for those participants who have mentioned both the linguistic and the social stereotype, the indexical relationship between the two became transformed through “iconization” (Irvine et al., 2009), i.e. the process through which the semiotic relationship between a linguistic variable and the social image it is associated with become blended, “as if a linguistic feature somehow depicted or displayed a social group’s inherent nature or essence” (p. 37), in this case, a certain aggressiveness. It perhaps noteworthy that many participants frequently tried to distance themselves from these negative stereotypes, some explicitly (e.g. P11BM2), and some through the use of the third person pronoun ‘they’ in reference to other Polish migrants, instead the inclusive first-person ‘we’.

In addition, the qualitative data show that “aggressiveness” was not only mentioned in relation to the Eastern European/Polish thug stereotype, but was also either hinted at, or explicitly mentioned in relation to Polish migrants’ politeness strategies, non-verbal communication, as well as accent. For example, P01PA emphasised Poles’ directness, stating: “We are more direct, and our tone is more demanding.” This sentiment was echoed by P07ZA, a female academic: “Sometimes when Poles speak English, their ‘Polishness’ gets through: the English tend to have a more positive tone, even if they stop you in the street. The Poles sound more neutral or even negative.” This image of Polish migrants was supported by P21KP and P12NT. The former claimed that, in her experience, Polish people in the UK hardly ever smiled in public interactions, while the latter stated, while speaking of Polish thugs: “Once I’ve heard them speak, I can tell by their accent - e.g. “Hello, can I buy this water, please” [pronounces with an exaggerated Polish accent and a tap [r]]. Actually, usually there is no ‘please’.” Differences in non-verbal communication styles were pointed out by P08KA, who stated: “We directly look at people’s faces - the English may perceive this as rude, a little aggressive.” She also added that in her opinion, some Polish people “have aggressive accents, especially when they say the ‘K-word’ [‘kurwa’ – ‘a bitch’]”.

Based on the findings presented above, it seems that, at least for some participants, /r/ is not only performing higher-order indexical work, but has perhaps been “iconized” (Irvine et al., 2009) as embodying the essence of the stereotyped group, characterised by a communication style which seems to be perceived as too direct, or even forceful. Since in Anglo-Saxon culture politeness is strongly linked to indirectness, much less so than in Eastern Europe (Ogiermann, 2009), behaviours not adhering to norms regarded as polite in England and

speaking with an “aggressive” accent, characterised by the “hard” Polish [ɹ] or [r], have become linked.

While it is clear that the dominant picture that emerges is one of negative in-group stereotypes, there is also some evidence that the [r] variable does have a degree of covert prestige attached to it and is even used for “code-crossing” (Rampton, 1999). P11BM2, who distanced himself from “stereotypical Pole” behaviour, shared the following information regarding his colleagues and swearing, especially using “the K-word” [“kurwa”]: “Everyone at work now swears in Polish - regardless of where they are from... All the 16-17 nationalities, including people from Africa or Asia - they all swear in Polish now. No idea how that happened. But I think they are fascinated by the ‘power’ of those words - Polish swearwords even sound aggressive because of the ‘heavy’ [r].”

4.6.5 Section Summary and Discussion

It is not possible to identify a single discernible indexical meaning carried by a single linguistic variable; instead, a whole a field of indexical meanings (Eckert, 2008) behind the non-prevocalic /r/ has been unveiled. Nevertheless, it is clear that the interview data contain a significant amount of evidence for predominantly negative attitudes surrounding the use of Polish-like /r/ variants, which were then linked to behaviours associated with Polish migrants which are perceived as negative, i.e. not using the word “please”, being overly direct or aggressive.

For some participants, such as P19MI and P01PA, /r/ carried no second-order indexical meaning, performing first order indexical work of marking their national and language background. Not only did these participants fail to provide any evidence of metalinguistic awareness linked to the variable, but they also produced higher rates of taps than 21 other participants and received the two highest scores on the AAFS /r/-fullness index.

Yet, for most participants, [ɹ] and [r] in particular seemed to have a variety of second-order indexical meanings, some of which signalled various alignments, for example, an alignment with Poland but also with the wider region of Eastern Europe. In some cases, the variable was clearly associated with foreignness of Polish migrants and their lack of willingness to integrate into the British society. This aligns with the findings of Hall (2017) and Hirson and Sohail (2007), who investigated the use of /r/ variants by English-Punjabi bilinguals. Both studies reported a link between the use of /r/ realisations associated with Punjabi and the speakers’ alignment with Punjabi culture (Hall, 2017) or self-identification as “Asians” rather

than “British Asians” (Hirson & Sohail, 2007), providing further evidence of the close connection between bilingual language use patterns and speaker identity.

For the few participants in this study who demonstrated high awareness of indexical meanings linked to the use of [r] or [r̥], as evident in their metalinguistic comments, those variants were clearly linked to stereotypes that they felt should be avoided due to their associations with foreignness as well the specific brand of “Polishness” represented by the Polish-thug-in-a-track-suit stereotype. P03GM and P12NT were examples of participants belonging to the latter category: neither produced any trills and while P12NT produced only a very low ratio of taps and lenited taps (0.36%), P03GM did not produce any Polish-like realisations at all, matching Labov’s (1972) description of the connection between stereotyping and the avoidance of stigmatised forms.

Thus, it seems that a certain kind social stigma are explicitly linked with the use of [r] or [r̥], at least for some participants. There has also been some evidence of iconization of the negative in-group stereotype of Polish “aggressiveness” and the “aggressive-sounding” tapped and trilled /r/ realisations. Yet, there was also an instance in which this negative stereotype was reevaluated with tapped and trilled /r/ linked with a powerful and assertive ways of speaking.

The study has also managed to find some evidence of metapragmatic practices regarding the use of non-prevocalic /r/ among the participants, e.g. the phrase “that bloody [r]” used by P12NT. Although, according to Johnstone and Kiesling (2008), such metapragmatic discourse is not always necessary for higher-order indexical meanings to arise, it stabilises the existing meanings for other members of the speech community. This reflects such practices found in literature: for example, as mentioned in the Literature Review chapter, many English-language textbooks (e.g. Spiewak & Golebiowska, 2001) state that a common feature of Polish learners’ English accents is “a prominent rolled /r/”, especially in the word-final position. This claim is contradicted both by the results of this study, as well as other empirical studies (Szpyra-Kozłowska, 2018; Zając & Rojczyk, 2017a), which reinforces the status of the trill as a linguistic stereotype: a feature that exists in the collective consciousness of the speech community, but which has almost certainly fallen out of use in modern day Polish, perhaps with the exception of emphatic speech and swearwords (Jaworski & Gillian, 2011), as well as Polish-accented English.

It has not been, nor will it ever be possible, to determine the meaning of a particular linguistic variable for all speakers within a community. This is because indexical meaning arise with individuals and may even differ for the speaker and the hearer. However, it is certainly possible to identify instances of repeated use, which this study has accomplished.

It is important to point out that the various indexical meanings discussed in this chapter are not mutually exclusive; for example, “being from Poland” may or may not entail “alignment with Poland” or “aggressiveness” depending on the speaker/hearer and the context. This means that the various orders of indexical meanings are available at the same time, layered, constantly dialectically competing with one another (Silverstein, 2003).

At the same time, it is important to acknowledge that, in spite of the evidence of strong meta-linguistic attitudes as well as several instances where the variation observed could be potentially linked to indexical function, this study does not provide enough evidence to confidently establish the existence of Labovian marker-like variation in the speech of Polish migrants living in the south of England. The evident variability in postvocalic /r/ realisations can be at least partially explained by internal constraints as well as speakers’ biographical factors and their acquisitional trajectories. To find supporting evidence for social patterning, future studies should analyse interactional practices and establish whether Polish migrants in England vary their postvocalic /r/ as a function of topic and style, as predicted by their negative evaluations. This approach would hopefully yield a deeper understanding of how negative ideologies are linked to individual usage of the variable.

Drummond and Schlee (2016) state that a linguistic variable does not always maintain the same meaning, as a change in someone’s identity can lead to a change in their linguistic practice; this is why, according to Johnstone and Kiesling (2008), the only way to learn “what a feature indexes to a particular speaker at a particular moment is to ask” (p. 23). Nonetheless, it is hoped that this study has at the very least provided a small snapshot, a glimpse into both linguistic and indexical practices of English-speaking Polish migrants living in the south of England in the second decade of the 21st century.

Chapter 5 Summary and Conclusions

The aims of this study were to find further evidence of variable rhoticity in the L2 English of Polish migrants in the south of England (previously reported by Waniek-Klimczak and Matysiak (2016)), to investigate the non-prevocalic /r/ variants employed by these speakers, as well as to explore the various factors that potentially impact their choices of /r/ realisations, focusing on SLA-related, phonological and social constraints. It was hoped that through investigating rhoticity and /r/ realisations in L2 English a contribution would be made to the understanding of the broader issue of foreign accent.

Both quantitative and qualitative analyses were employed. The purpose of the former was to identify the factors which correlate with the participants' choices of specific non-prevocalic /r/ variants, while the purpose of the latter was to supplement this quantitative approach rooted in the variationist tradition and allow the researcher to dig deeper into the participants' individual beliefs in search of indexical meanings behind the /r/ variable.

The research questions addressed were as follows:

RQ1: Is the L2 English of Polish migrants consistently rhotic, non-rhotic, or variably rhotic?

RQ1a: What are the internal constraints on variability in the use of rhotic and non-rhotic variants?

RQ2: Do Polish migrants use intrusive /r/?

RQ2a: What are the internal constraints on variability in the use of intrusive /r/?

RQ3: Are Polish migrants living in the UK consistent in terms of their choice of non-prevocalic English /r/ realisations, or are they variable?

RQ3a: Are there any phonetic constraints on variability in /r/ realisations?

RQ3b: Which acquisitional variables have an impact on variability in /r/ realisations?

RQ3c: Are there any social constraints on variability in /r/ realisations?

RQ3d: What is the main non-prevocalic /r/ realisation in L2 English speech of Polish migrants living in the UK?

RQ4: Is there any evidence of stylistic stratification, i.e. style shifts, in the use of /r/ realisations in Polish-accented English of Polish migrants living in the south of England?

RQ4a: What is the direction of those style shifts?

RQ5: Is there any evidence of higher-order indexical function linked to rhoticity or /r/ realisations in Polish-accented English of Polish migrants living in the south of England?

RQ5a: What are the indexical meanings linked to the non-prevocalic /r/ in Polish-accented English of Polish migrants living in the south of England?

The following section will present a summary of the main results in relation to the research questions posed. Answers to research questions related to variability constraints will be discussed jointly.

5.1 Summary of Research Findings

5.1.1 Research Question 1: Is the L2 English of Polish migrants consistently rhotic, non-rhotic, or variably rhotic?

The results provide clear evidence that the L2 English of Polish migrants living in England is characterised by variable rhoticity, which confirms the findings of Waniek-Klimczak and Matysiak (2016). While some speakers were significantly less variable than others, with three out of 26 participants displaying ratios of non-rhotic (category one) tokens ranging between 93.56 – 97.75%, and three other speakers producing similarly high ratios of rhotic realisations (categories two, three and four) ranging between 92 and 95.67%, no speaker in the sample was consistently non-rhotic or consistently rhotic. These findings demonstrate variable rhoticity, which perhaps suggests a highly variable nature of L2 English of Polish speakers living in the UK (cf. Drummond, 2010, 2010b, 2011, 2012, 2013).

5.1.2 Research Questions 2 and 2a: Do Polish migrants use intrusive /r/? If so, what are the internal constraints on variability in the use of intrusive /r/?

Although it had been speculated that intrusive /r/ would be used to some extent, especially by speakers with high Level of English, English Use Index values and Integrativeness (Gardner, 2010) to index their “native-like” proficiency in English and/or their integrative orientation, no evidence of intrusive /r/ was found either word-internally (in the Word List items or Free Speech recordings), or across words boundaries (in the Free Speech data). Therefore, the research question regarding constraints could not be addressed. Suggested explanations for the lack of evidence for any use of the variable by the participants are related to intrusive /r/ not being taught to Polish learners of English as part of the EFL curriculum in Poland; the relative complexity of the phonological rules governing the distribution of the variable, which may negatively affect its acquisition into non-native speech; as well as the potentially limited exposure of L2 English speakers to the feature, which may be linked to its frequent stigmatisation in England (Cruttenden, 2014; Hannisdal, 2007; Wells, 1982b). More research involving a significantly larger number of participants is recommended to further investigate the phenomenon.

5.1.3 Research Question 3: Are Polish migrants living in the UK consistent in terms of their choice of non-prevocalic English /r/ realisations, or are they variable?

No participant was fully consistent in their choice of /r/ variants; all participants employed variants from at least two categories (e.g. approximants and taps), with some using realisations from all the five categories.

Overall (AATotal) data analysis shows that category two tokens were dominant for the majority of speakers, i.e., 17 participants out of 26. Nine speakers employed non-rhotic realisations as the dominant variant. Category three tokens (taps and lenited taps) were employed by 17 out of the 26 participants. Only two participants out of the whole cohort, P22SJ and P19MI, employed any category four variants, i.e. trills/trilled fricatives.

The results provide clear evidence for variability in non-prevocalic /r/ realisations. Nonetheless, the speakers’ choices of /r/ categories were not completely random; instead, the use of some variants was positively and/or negatively correlated with the use of another. Based on Spearman's rho correlation coefficients, the following patterns of use for non-prevocalic /r/-variants were suggested:

- The more Polish speakers of L2 English use non-rhotic (category one) variants, the less they are likely to employ any taps and tap-like variants (category three);
- The more Polish speakers of L2 English use non-rhotic (category one) variants, the less they are likely to employ trills and trilled fricatives (category four);
- The more Polish speakers of L2 English use trills and trilled fricatives (category four variants), the more likely they are to produce taps and tap-like variants (category 3).

It has been argued that the correlations presented above have, to a large extent, an articulatory basis. This is not only because taps are sometimes regarded as “failed” versions of trills (Ladefoged & Maddieson, 1996), but, more generally, due to the fact that non-constrictive /r/ realisations (category one) are less likely to induce incidental tapping or flapping (category three). Nonetheless, further analysis demonstrated that acquisitional as well as social factors are also significant.

5.1.4 Research Questions 1a and 3a: What are the internal constraints on variability in the use of rhotic and non-rhotic variants? Are there any phonetic constraints on variability in /r/ realisations?

The use of non-rhotic (category one) tokens and approximants/offglides (category two) was predicted by a number of variables, with the model accounting for 34% and 19.5% of the variance in dependent variables respectively.

The two strongest predictor variables that discourage non-rhoticity in Polish-accented English while encouraging the use of approximants, offglides and /r/-coloured vowels (category two), albeit not as strongly, are NORTH and NEAR vowels. On the other hand, the two strongest predictors of category two variant use are anterior and coronal consonants in the onset.

Only two predictors were identified for the use of L1-like taps, flaps and lenited taps (category three tokens). Moreover, the model was reported to account only for 7.7% of variance. The stronger predictor for the use of Polish-like realisations was a type B coda, i.e. one containing a dental/alveolar/post-alveolar or palatal consonant.

Potential explanations for correlations were proposed in light of the differences between Polish and English phonology, coarticulatory effects, as well as the concept of ease of articulation or economy of effort (Guenther, 1995; Perkell et al., 2000). In addition, it is suggested that while variability is a feature of both native and non-native speech, bilingual

speakers have two sets of resources to fall back on, i.e. L1 and L2 phonological patterns and sounds available to them. This means that in their L2 performance they may resort to using L1 patterns or sounds for ease of articulation, as well as acquisitional or social reasons.

The findings have potential implications for TESOL professionals as well as those L2 English learners who wish to produce more native-like variants. The contexts encouraging more /r/-ful realisations should be incorporated into English pronunciation for Poles curricula and highlighted to learners.

5.1.5 Research Question 3b: Which acquisitional variables have an impact on variability in /r/ realisations?

The results suggest that acquisitional factors indeed play a significant role in L2 English pronunciation of first-generation migrants. A number of SLA-related variables were identified as having statistically significant relationships with the participants' /r/ variant choices. These included Formal Instruction in English in Poland, which negatively correlated with the use of trills, and IELTS Grammatical Range & Accuracy as well as Self-estimated Level of English upon Arrival, which were negatively correlated with production of taps and lenited taps. In addition, Self-estimated Current Level of English correlated with lower ratios of mispronounced tokens. Out of all the attitudinal variables based on Gardner's (2010) model, none were identified as statistically significant after Bonferroni adjustment. Although these results warrant further investigation, it is hoped that this study has at the very least succeeded in laying the groundwork for subsequent research.

5.1.6 Research Question 3c: Are there any social constraints on variability in /r/ realisations?

After Bonferroni correction, no social measures were identified as significantly correlated with the participants' choice of /r/ variants. However, Social Grade, which reflected the migrants socio-economic status in the host country was negatively correlated with lower percentage of mispronounced tokens, which seems to confirm the assumption that higher proficiency in English, including pronunciation, is required for more prestigious jobs and positions.

5.1.7 Research Question 3d: What is the main non-prevocalic /r/ realisation in L2 English speech of Polish migrants living in the UK?

Overall, the most-frequently employed non-prevocalic /r/ variants belonged to category two (approximants, offglides, /r/-coloured vowels), comprising 57% of tokens. The second most common category was category one (non-rhotic), which accounted for 38.7% of data, followed by category three, i.e. taps and tap-like variants (4.15% of tokens), idiosyncratic realisations (category five - 0.42%) and trills and trilled fricatives (category four - 0.08%).

In contrast to the WL data set as well as the Total data set, where category two tokens were dominant, the category most frequently employed in Free Speech was category one (54.41%), with category two being the second most common choice (42.55%). This demonstrates that the two most frequently employed variants in L2 English of Polish migrants living in the south of England are either non-rhotic variants (category one) or rhotic L2-like variants (category two).

While it is not possible to make direct comparisons with the findings of existing studies on rhotics in Polish-accented English (e.g. Zajac, 2016; Zajac and Rojczyk, 2017a, 2017b), since they focused on /r/ rather than non-prevocalic /r/ specifically, the current findings align with the results presented in those studies in that alveolar trills are indeed “extremely rare” in L2 English of Polish speakers, while the most frequently employed variants in Polish accented English overall are approximants.

Evidence for idiosyncratic strategies for non-prevocalic /r/ articulation, i.e. category five tokens, has also been found, the frequency of these variants being higher than that of type-three tokens. This warrants further investigation of such idiosyncratic realisations using suitable research tools enabling the examination of articulatory details such as e.g. ultrasound imaging.

5.1.8 Research Questions 4 and 4a: Is there any evidence of stylistic stratification, i.e. style shifts, in the use of /r/ realisations in Polish-accented English of Polish migrants living in the south of England. What is the direction of those style shifts?

The results provided evidence of style shifts in terms of /r/ variants choice between the Word List and the Free Speech task, with the Word List data set comprising a higher proportion of /r/-full realisations than Free Speech data. This result is consistent with the traditional

variationist approach to sociolinguistic research (Labov, 1972), representing variation in the use of a linguistic variable across the different parts of a sociolinguistic interview. The fact that the variable is prone to style shifts can also be interpreted as indicative of its indexical status.

The overall direction of style shifts is from the more /r/-full performance on the Word List task to the less /r/-full pronunciation on the Free Speech task. When less attention was paid to language, the main direction of the shift appeared to be away from the more /r/-ful variants, which the participants perceived as less-prestigious (see section 4.6.3). The suggested explanations revolved around the issues of the particularly strong influence of spelling on L2 English speakers' pronunciation discussed by Brown (1988); the negative correlation between word frequency and more /r/-full pronunciation of tokens, with lower frequency words encouraging more /r/-full pronunciations; as well as the idea of "correctness" as transferred from Polish. The latter explanation was based on Szpyra-Kozłowska's (2018) suggestion that native speakers of Polish may regard non-rhotic, "/r/-less" pronunciation of words as "morphologically incomplete" or "incorrect", which contributes to the retention of the postvocalic /r/ in their English speech. The findings demonstrate that one of the potential sources of foreign accent is spelling pronunciation, which again has implications for TESOL practitioners.

5.1.9 Research Question 5 and 5a: Is there any evidence of higher-order indexical function linked to rhoticity or /r/ realisations in Polish-accented English of Polish migrants living in the south of England? What are the indexical meanings linked to the non-prevocalic /r/ in Polish-accented English of Polish migrants living in the south of England?

Qualitative data contained ample evidence for meta-discourse regarding /r/ variants both in Polish and Polish-accented English. While the participants provided quite a wide range of characteristics which they believed were key features of Polish-accented English, the quality of /r/ was the most widely referred to feature by far, which suggests higher-order indexical function attached to it (Johnstone & Kiesling, 2008; Silverstein, 2003).

The use of trills in particular evoked strong attitudinal responses, which, combined with high awareness of that variant and several references involving the use of labels and phrases referring to trills, such as "rolling the /r/", "hard /r/" or even "that bloody /r/", confirms the variant's status as a linguistic stereotype (Labov, 1972), as previously suggested by Szpyra-

Kozłowska (2018), and perhaps offers an additional explanation for its avoidance, as inferred from the extremely low percentage of trills (0.08%) in the speech data analysed.

A whole a field of layered indexical meanings (Eckert, 2008) behind the non-prevocalic /r/ variants were identified. These were not necessarily shared by all the speakers; however, some shared beliefs were identified. For some participants, /r/ was not linked to any second-order indexical meaning, performing first order indexical work of marking their national and language background. These participants did not demonstrate any metalinguistic awareness of the variable; they also produced higher rates of taps than most other participants.

For most participants, [r] and [r̥] in particular were linked to second-order indexical meanings, signalling various alignments, for example, an alignment with Poland but also with the wider region of Eastern Europe. In some cases, the variable was clearly linked to the notion of foreignness and a lack of willingness to integrate into the British society. This aligns with the findings of Hall (2017) and Hirson and Sohail (2007), who investigated the use of /r/ variants by English-Punjabi bilinguals, reporting a link between the use of /r/ realisations associated with Punjabi and the speakers' alignment with their Punjabi heritage.

Overall, interview data contained a significant amount of evidence for predominantly negative in-group stereotypes linked with the use of [r] or [r̥]. It is suggested that the negative in-group stereotype of Polish “aggressiveness” and the “aggressive-sounding” tapped and trilled /r/ realisations have undergone the process of iconization (Irvine et al, 2009), establishing a semiotic relationship between the linguistic variable and the negative social image it became associated with. Since the variable has such a strong indexical function as an in-group stereotype, it may have implications not only for sociolinguists, but also for people who come into contact with Polish migrants and the migrants themselves; therefore, it should be further investigated in the context of out-group stereotypes of Polish migrants, accent bias and ensuing discrimination.

5.2 Research Limitations and Suggestions for Further Research

Although it is felt that this study has succeeded in its objectives to establish the existence of variation in /r/ variants and to explore its nature as well as its sources, the study has a number of limitations.

The first, and perhaps somewhat justified, point of critique could be the rather broad focus of the study. Instead of an in-depth exploration of one type of constraints only, the study

investigated the impact of acquisitional, attitudinal, phonological as well as social factors on non-prevocalic /r/ variability, which perhaps resulted in a discussion that was challenging in terms of balancing its broad scope with an in-depth analysis of the issues at hand, perhaps, out of necessity, somewhat sacrificing the latter in places.

However, it was felt that exploring all the aforementioned sources of variation was necessary in order to obtain as full a picture of the phenomenon as possible within the constraints of this PhD research project, and that eliminating any of those areas would mean missing out on potentially important insights into the nature of the phenomenon. In addition, it was felt that this relatively broad scope was particularly justified, or even necessary, as the study was largely exploratory in nature due to the fact that, to the researcher's best knowledge, at the time when work on this research project commenced, there were no published studies investigating rhoticity in Polish migrants in the UK.

Another limitation is related to the very nature of auditory analysis, which is also referred to as "impressionistic" analysis, and with good reason: even with phonetically trained judges, two variants distinct in terms of articulations can be perceived as identical to which there is ample evidence (Delattre & Freeman, 1968; Mielke, Baker, & Archangeli, 2016; Twist, Baker, Mielke, & Archangeli, 2007). Although visual inspection of spectrograms was certainly helpful in corroborating the results obtained through impressionistic analysis, it was not enough to investigate the fine articulatory detail between the different rhotics. This was largely due to the fact that different articulatory settings employed for different approximant variants of /r/ can result in nearly-identical acoustic correlates (Delattre and Freeman, 1968). As discussed above, the focus of this study was already quite broad, which is why employing tools such as ultrasound imaging or magnetic resonance imaging was not possible. However, a detailed exploration focusing on articulatory descriptions of the numerous /r/ variants produced by Polish speakers of L2 English, particularly the 'intermediate', "fudged" variants briefly mentioned in the Methodology chapter, and using appropriate research tools is highly recommended.

A related point concerns the fact that the categories devised for coding /r/ variants were established a-priori, i.e. pre-determined based on the literature, rather than emerged from the language data examined. As a result, potentially valuable finds, such as some of the idiosyncratic variants observed in the data set, or the L1/L2 "intermediate" variants produced by some participants, were "forced" into a pre-determined category, rather than properly

investigated and used as a basis for establishing fine-tuned categories based on articulatory detail. Again, the rationale for this decision was related to the fact that the study did not have an articulatory focus, and as such did not employ the tools necessary for this type of research. However, in light of the observations made, an exploration of articulatory properties of rhotics employed by Polish speaker of L2 English research using UI or MRI and a bottom-up approach to category creation is strongly recommended to verify and expand on the findings presented in this thesis.

Another significant limitation that has to be acknowledged is the number of participants which took part in the study, as data were collected from a relatively small sample of 26 speakers. This was partially a deliberate decision, as the priority was to collect an adequate amount of speech data, while maintaining personalised relationships with participants, approaching them as individuals, not anonymous numbers, in the hope of obtaining richer qualitative data (see Methodology). However, there were also pragmatic reasons: the data collection process was relatively time consuming, which meant that finding individuals willing to sacrifice several hours of their time to take part in a study, and without any financial compensation, was extremely challenging.

The consequences of this decision are twofold: while the study managed to obtain enough speech tokens to investigate the impact of phonological context on the non-prevocalic /r/ and identify a number of predictors using multiple regression analysis, the same could not be achieved for SLA-related or social constraints, which is because conducting multiple regression analysis, and thus eliminating multicollinearity issues, is only possible with a number of participants that would not be possible to obtain or examine in the context of this study. Although it would have been possible to conduct multivariate analysis by reducing the number of independent variables in the model, it was felt that for exploratory reasons, examining a wide range of factors was more important than achieving a manageable multivariate model. As a result, although a number of SLA-related and social factors have been identified as significantly correlated with the dependant variables, the results presented in this part of the study can only be regarded as tentative base for future research. Therefore, in order to further investigate the significance of SLA-related and/or social factors for L2 accent using quantitative methods, a significantly larger sample size as well as using a reduced number of factors in the model, which would allow for multivariate analysis, is recommended.

In addition, the speech data analysed for this project is a mere “snapshot” of participants interacting with a single individual in a single, albeit relatively long, session in a single setting. This creates problems such as potential for bias and speech accommodation to the researcher (Giles, Coupland, & Justine, 1991). As Drummond and Schlee (2016) state, linguistic variables do not always maintain their meaning, but change following changes in someone’s identity. As numerous third-generation variationist studies demonstrated, identity is not fixed, and neither are speakers’ linguistic choices (Sharma, 2011; Sharma & Sankaran, 2011). It is certainly true that the current study does not account for how dynamic language is; nonetheless, it is hoped that what it does offer is at the very least a preliminary insight into Polish speakers’ of L2 English speech patterns regarding /r/ realisations. Therefore, a follow up study using research tools similar to those presented in Sharma (2011), i.e. self-recordings of interactions with different individuals in different situations is would offer richer insights into how speaker’s phonetic choices change depending on the domain and the interlocutor.

Finally, the analysis of the qualitative data collected in semi-structured interviews has revealed strongly negative in-group stereotypes shared by many speakers. Even though, as Milroy and Milroy (1999) point out, it is no longer acceptable to discriminate people on the grounds of their social class, race or religion; linguistic discrimination and accent bias are still present even in multicultural and multilingual countries such as the UK (Levon, Sharma, Watt, Cardoso, & Ye, 2021; Sharma, Levon, & Ye, 2021). In addition, particularly following Brexit, many Polish migrants in the UK have been feeling that it is more acceptable socially to discriminate against Eastern Europeans rather than other, non-white migrants (Rzepnikowska, 2019). Since the variable investigated, i.e. non-prevocalic /r/ variants, is clearly endowed with a range of indexical meanings that evoke adequately strong attitudinal responses within the in-group members, it is important that future studies further investigate the variable in the context of out-group stereotypes and the attached stigma, accent bias, and the resulting potential obstacles of the associated stigma on, for example, to employment and/or grounds for accent-based discrimination.

5.3 Final thoughts

As expected, it has not been possible to determine a single factor responsible for the variation in rhoticity and non-prevocalic /r/ choices in the L2 speech of Polish migrants living in the south of England. This study has only examined some of potential sources of variation; for example, neurological and psycholinguistic factors were not included within the remit of the study. However, the study has succeeded in identifying a number of acquisitional, attitudinal,

phonological and social factors that act as constraints on Polish users' of L2 English /r/-fullness.

While it is clear that acquisitional variables play a significant role, affecting Polish migrants' L2 English accents, the results demonstrate that there are also phonetic contexts which seem to encourage rhoticity or even the use of Polish-like variants. This finding is a direct contribution to the field of TESOL, as well as the body of SLA literature interested in L2 pronunciation. The phonetic contexts which have been identified as discouraging non-rhoticity should be of particular significance for pronunciation teachers as well as those L2 speakers who wish to sound more "native-like" in terms of their non-prevocalic /r/ choices. These contexts could be incorporated into English pronunciation classes and emphasised as potentially challenging for L2 learners.

Nonetheless, it is perhaps the qualitative analysis of social factors that has yielded the most meaningful results, demonstrating once again that relying solely on statistical analysis in an attempt to arrive at a comprehensive, meaningful explanation for complex and usually "messy" human choices can be limited, and that the bottom-up approach to indexicality suggested by Johnstone and Kiesling (2008) is perhaps key to arriving at the very semblance of understanding of these choices.

The current study has unveiled a whole range of mostly negative indexical meanings associated particularly with the use of tapped and trilled /r/ variants, which, in turn, have been linked to negative in-group stereotypes of a swearing, aggressive thug who almost actively refuses to integrate in the host country. Whether it is the in-group stereotypes that are the product of the social influence of out-group stereotypes or vice versa, stereotypes are learnt and transmitted (Macrae, Stangor, & Hewstone, 1996). As they spread, even seemingly innocuous accent stereotypes can cause harm to those who use the stereotyped accent features by impeding their opportunities for professional development or employment (Levon, Sharma, Watt, Cardoso, & Ye, 2021). This is why "that bloody /r/" should not be easily dismissed, but investigated further as a symptom of a broader issue that is still pertinent today, i.e. attitudes to accents and accent bias. By investigating Polish migrants' beliefs on Polish-accented English, identifying a range of indexical meanings related to non-prevocalic /r/ and exploring related in-group stereotypes, the current study has laid foundation for future sociolinguistic or even sociological studies interested in those areas. It is hoped that by examining variability in /r/ realisations and its origins, the current study has

also made a contribution to the small but growing body of knowledge regarding rhoticity in Polish-accented English.

List of References

- 2011 Census. (2011). Retrieved from <https://www.ons.gov.uk/census/2011census>
- Agha, A. (2007). *Language and Social Relations*. Cambridge University Press. <https://books.google.pl/books?id=cm4JlkgSKPAC>
- Ashby, M., & Maidment, J. (2005). *Introducing phonetic science*. Cambridge University Press.
- Ashby, P. (2013). *Understanding Phonetics*. Taylor & Francis. <https://books.google.co.uk/books?id=xb5EAQAAQBAJ>
- Baker, A. (2006). *Ship Or Sheep? Book and Audio CD Pack: An Intermediate Pronunciation Course*. Cambridge University Press. <https://books.google.co.uk/books?id=KEFXKKYErwC>
- Balas, A. (2009). English centering diphthong production by Polish learners of English. *Research in language*, 7, 129-148.
- Balas, A. (2018). English vowel perception by Polish advanced learners of English. *Canadian Journal of Linguistics/Revue canadienne de linguistique*, 63(3), 309-338.
- Ball, M. J. (2017). Transcribing rhotics in normal and disordered speech. *Clinical Linguistics & Phonetics*, 31(10), 806-809. <https://doi.org/10.1080/02699206.2017.1326169>
- Baran-Łucarz, M. (2014). The link between pronunciation anxiety and willingness to communicate in the foreign-language classroom: The Polish EFL context. *Canadian Modern Language Review*, 70(4), 445-473.
- Birdsong, D. (2007). Nativelike pronunciation among late learners of French as a second language. In O. S. Bohn & M. J. Munro (Eds.), *Language experience in second language speech learning*. John Benjamins.
- Boersma, P. W., David. (2001). *Praat: doing phonetics by computer [Computer program]*. In (Version 6.1.54) <http://www.praat.org/>
- Bogacka, A., Schwartz, G., Zydorowicz, P., Połczyńska, M., & Orzechowska, P. (2006). The production and perception of schwa in second language acquisition: The case of Polish learners of English. *IFAtuation: A life in IFA. A festschrift for Professor Jacek Fisiak on the occasion of his 70th birthday*, 71-84.
- Bongaerts, T., Planken, B., & Schils, E. (1997). Age and ultimate attainment in the pronunciation of a foreign language. *Studies in Second Language Acquisition*, 19, 447-465.
- Boyce, S., Tiede, M., Espy-Wilson, C. Y., & Groves-Wright, K. (2015). Diversity of tongue shapes for the American English rhotic liquid. ICPHS,
- Braun, V., & Clarke, V. (2022). Conceptual and design thinking for thematic analysis. *Qualitative Psychology*, 9(1), 3.
- Britain, D. (2010). Dialect contact, focusing and phonological rule complexity: The koineisation of Fenland English. *The Sociolinguistics Reader*, 231-247.
- Britannica, T. E. o. E. (2013). *Reading* <https://www.britannica.com/place/Reading-England>
- Brown, A. (1988). Linking, intrusive, and rhotic/r/in pronunciation models. *Journal of the International Phonetic Association*, 18(2), 144-151.
- Bryman, A., & Cramer, D. (2004). *Quantitative data analysis with SPSS 12 and 13: A guide for social scientists*. Routledge.
- Budkowska, M. (2014-2015). Wady wymowy u osób dorosłych. Badania w grupie studentów z rotacyzmem. *Biuletyn Logopedyczny PTL*, 1-2(28-29), 55-70.

- Campbell, H. M., Harel, D., & McAllister Byun, T. (2017). Selecting an acoustic correlate for automated measurement of /r/ production in children. *The Journal of the Acoustical Society of America*, 141(5), 3572-3572.
- Cantor, A. B. (1996). Sample-size calculations for Cohen's kappa. *Psychological methods*, 1(2), 150.
- Carter, P. (1999). Abstractness in phonology and extrinsic phonetic interpretation: The case of liquids in English. Proceedings of the XIVth International Congress of Phonetic Sciences,
- Catford, J. C. (2002). On Rs, rhotacism and paleophony. *Journal of the International Phonetic Association*, 31(2), 171-185. <https://doi.org/10.1017/S0025100301002018>
- Cheshire, J., Fox, S., Kerswill, P., & Torgersen, E. (2008). Ethnicity, friendship network and social practices as the motor of dialect change: Linguistic innovation in London. *Sociolinguistica*, 22(1), 1-23.
- Co to znaczy Kwadrat? (2022). Retrieved 10.11.21 from <https://slang.pl/kwadrat/>
- Collins, B., & Mees, I. M. (2013). *Practical Phonetics and Phonology: A Resource Book for Students*. Routledge. <http://books.google.co.uk/books?id=faVJTQlw9eQC>
- Coupland, N., & Jaworski, A. (2009). *The New Sociolinguistics Reader*. Macmillan Education UK. <https://books.google.pl/books?id=7MiYQQAACAAJ>
- Cruttenden, A. (2014). *Gimson's Pronunciation of English*. Taylor & Francis. <http://books.google.co.uk/books?id=M2nMAGAAQBAJ>
- Crystal, D. (2003). *A Dictionary of Linguistics and Phonetics*. Wiley. <https://books.google.co.uk/books?id=3JtAOHlHlHoC>
- Dalcher, C. V., Knight, R.-A., & Jones, M. J. (2008). Cue switching in the perception of approximants: evidence from two English dialects. *University of Pennsylvania Working Papers in Linguistics*, 14(2), 9.
- Delattre, P., & Freeman, D. C. (1968). A dialect study of American r's by x-ray motion picture. *Linguistics*, 6(44), 29-68.
- Derwing, T. M., Munro, M. J., & Thomson, R. I. (2008). A longitudinal study of ESL learners' fluency and comprehensibility development. *Applied Linguistics*, 29(3), 359-380.
- Dewaele, J.-M. (2002). Using sociostylistic variants in advanced French interlanguage: The case of nous/on. *Eurosla Yearbook*, 2(1), 205-226.
- Dewaele, J.-M., MacIntyre, P. D., Boudreau, C., & Dewaele, L. (2016). Do girls have all the fun? Anxiety and enjoyment in the foreign language classroom. *Theory and practice of second language acquisition*, 2(1), 41-63.
- Dhananjaya, N., Yegnanarayana, B., & Bhaskararao, P. (2012). Acoustic analysis of trill sounds. *The Journal of the Acoustical Society of America*, 131(4), 3141-3152.
- Dickson, V., & Hall-Lew, L. (2017). Class, gender, and rhoticity: The social stratification of non-prevocalic /r/ in Edinburgh speech. *Journal of English Linguistics*, 45(3), 229-259.
- Diller, K. C. (1981). Individual differences and universals in language learning aptitude.
- Dłuska, M. (1981). *Fonetyka polska. Artykułacje głosek polskich*. Warszawa-Kraków: Państwowe Wydawnictwo Naukowe.
- Docherty, G., & Foulkes, P. (2001). Variability in (r) production-instrumental perspectives. *r-atics. Bruselj: Etudes & Travaux*.
- Dörnyei, Z. (2007). *Research Methods in Applied Linguistics: Quantitative, Qualitative, and Mixed Methodologies*. Oxford University Press. <http://books.google.co.uk/books?id=gNh6QgAACAAJ>

- Dörnyei, Z. (2009a). The L2 Motivational Self System. In P. Z. Dörnyei & E. Ushioda (Eds.), *Motivation, Language Identities and the L2 Self*. (pp. 1-8). Channel View Publications. <https://books.google.co.uk/books?id=59fl2aQLSBsC>
- Dörnyei, Z. (2009b). *The psychology of second language acquisition*. Oxford University Press Oxford.
- Dörnyei, Z., & Csizér, K. (2012). How to design and analyze surveys in SLA research? . In A. Mackey & S. Gass (Eds.), *Research methods in second language acquisition: A practical guide* (pp. 74-94). Wiley-Blackwell.
- Dörnyei, Z., Csizér, K., & Németh, N. (2006). *Motivation, language attitudes and globalisation: A Hungarian perspective*. Multilingual Matters.
- Dowd, J., Zuengler, J., & Berkowitz, D. (1990). L2 Social Marking: Research Issues. *Applied Linguistics*, 11(1), 16-29. <https://doi.org/10.1093/applin/11.1.16>
- Drummond, R. (2010). *Sociolinguistic variation in a second language: the influence of local accent on the pronunciation of non-native English speakers living in Manchester*. [Phd thesis]. University of Manchester.
- Drummond, R. (2010b, 1st-3rd May). Speaking like the locals – the acquisition of two local variants in the spoken English of native Polish speakers living in Manchester. New Sounds 2010, Poznan, Poland.
- Drummond, R. (2011). Glottal variation in /t/ in non-native English speech: Patterns of acquisition. *English World-Wide*, 32(3), 280-308.
- Drummond, R. (2012). Aspects of identity in a second language: ING variation in the speech of Polish migrants living in Manchester, UK. *Language Variation and Change*, 24, 107-133.
- Drummond, R. (2013). The Manchester Polish STRUT: Dialect acquisition in a second language. *Journal of English linguistics*, 41(1), 65-93.
- Drummond, R., & Schlee, E. (2016). Identity in variationist sociolinguistics. In *The Routledge handbook of language and identity* (pp. 76-91). Routledge.
- Eberhardt, M. (2018). Stylistic variation in /r/ Shifting personas on a bridal reality television show. *Sociolinguistic Studies*, 12(3-4), 345-366.
- Eberhardt, M., & Downs, C. (2013). A Department Store Study for the 21st Century: /r/ vocalization on TLC's Say Yes to the Dress. *University of Pennsylvania Working Papers in Linguistics*, 19(2), 7.
- Eberhardt, M., & Downs, C. (2015). "(r) You Saying Yes to the Dress?" Rhoticity on a Bridal Reality Television Show. *Journal of English linguistics*, 43(2), 118-142.
- Eckert, P. (2008). Variation and the indexical field. *Journal of sociolinguistics*, 12(4), 453-476.
- Eckert, P. (2012). Three waves of variation study: The emergence of meaning in the study of sociolinguistic variation. *Annual review of Anthropology*, 41, 87-100.
- Eckert, P., & McConnell-Ginet, S. (1999). New generalizations and explanations in language and gender research. *Language in society*, 28(2), 185-201.
- Ellis, N. C., Kroll, J., & de Groot, A. (2005). Bilingual language acquisition. *Handbook of bilingualism: Psycholinguistic approaches*, 3-8.
- Espy-Wilson, C. (2004). Articulatory strategies, speech acoustics and variability. In (pp. B62-B76): Citeseer.
- Espy-Wilson, C., Narayanan, S., Boyce, S., & Alwan, A. (2000). Acoustic modelling of American English /r/. *The Journal of the Acoustical Society of America*, 108(343 (2000)). <https://doi.org/10.1121/1.429469>

- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1-4.
- Feigenbaum, E. (2007). *The Role of Language Anxiety in Teacher-fronted and Small-group Interaction in Spanish as a Foreign Language: How is Pronunciation Accuracy Affected?* University of Pittsburgh].
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. sage.
- Flege, J. E. (1988). Factors affecting degree of perceived foreign accent in English sentences. *The Journal of the Acoustical Society of America*, 84(1), 70-79.
- Flege, J. E. (2012). The role of input in second language (L2) speech learning. VIth International Conference on Native and Non-native Accents of English, Łódź, Poland,
- Flege, J. E., Birdsong, D., Bialystok, E., Mack, M., Sung, H., & Tsukada, K. (2006). Degree of foreign accent in English sentences produced by Korean children and adults. *Journal of Phonetics*, 34(2), 153-175.
- Flege, J. E., & Fletcher, K. L. (1992). Talker and listener effects on degree of perceived foreign accent. *The Journal of the Acoustical Society of America*, 91(1), 370-389.
- Flege, J. E., & Liu, S. (2001). The effect of experience on adults' acquisition of a second language. *Studies in Second Language Acquisition*, 23, 527-552.
- Flege, J. E., Yeni-Komshian, G. H., & Liu, S. (1999). Age constraints on second-language acquisition. *Journal of memory and language*, 41(1), 78-104.
- Foulkes, P. (1997). English [r]-sandhi-a sociolinguistic perspective. *Histoire épistémologie langage*, 19(1), 73-96.
- Foulkes, P., & Docherty, G. (2001). Variation and change in British English/r. In H. Van de Velde, & Van Hout, R. (Ed.), *r-atics: sociolinguistic, phonetic and phonological characteristics of/r/*. Brussels.
- Foulkes, P., & Docherty, G. J. (2000). Another chapter in the story of /r/: 'Labiodental' variants in British English. *Journal of sociolinguistics*, 4(1), 30-59. <https://doi.org/10.1111/1467-9481.00102>
- Foulkes, P., Scobbie, J. M., & Watt, D. J. L. (2010). Sociophonetics. In W. Hardcastle, J. Laver, & F. Gibbon (Eds.), *Handbook of Phonetic Sciences (2nd ed.)*. (pp. 703-754.). 703-754.
- Gardner, R. C. (2010). *Motivation and Second Language Acquisition: The Socio-educational Model*. Peter Lang. <http://books.google.co.uk/books?id=Ky15oSCfLwC>
- Gardner, R. C., Day, J. B., & MacIntyre, P. D. (1992). Integrative motivation, induced anxiety, and language learning in a controlled environment. *Studies in Second Language Acquisition*, 14(2), 197-214.
- Gardner, R. C., & MacIntyre, P. D. (1991). An instrumental motivation in language study: Who says it isn't effective? *Studies in Second Language Acquisition*, 13(1), 57-72.
- Gardner, R. C., & MacIntyre, P. D. (1993). On the measurement of affective variables in second language learning. *Language Learning*, 43(2), 157-194.
- Garrett, P. (2010). *Attitudes to language*. Cambridge University Press.
- Gick, B. (1999). A gesture-based account of intrusive consonants in English. *Phonology*, 16(1), 29-54.
- Giles, H., Coupland, N., & Justine, C. (Eds.). (1991). *Accommodation theory: Communication, context, and consequence*. Cambridge University Press & Editions de la Maison des Sciences de l'Homme.
- Gillian, E., & Jaworski, S. (2014). A Discussion of Walpiri and Polish rhotics. *Unity in Diversity*, 2, 133-148.

- Guenther, F. H. (1995). Speech sound acquisition, coarticulation, and rate effects in a neural network model of speech production. *Psychological review*, 102(3), 594.
- Hall, C. (2017). The rhotic pronunciation of Anglo-English and Punjabi-English bilingual speakers in West Yorkshire. *Matices en Lenguas Extranjeras*(11), 132-153.
- Halle, M. (1977). Tenseness, vowel shift, and the phonology of the back vowels in Modern English. *Linguistic Inquiry*, 8(4), 611-625.
- Hannisdal, B. R. (2007). *Variability and change in Received Pronunciation A study of six phonological variables in the speech of television newsreaders*. The University of Bergen.
- Hannisdal, B. R. (2010). What's happening in RP? An empirical look at variation and change in Received Pronunciation. Phon&Phon Meeting at Univwersytet IM. Adama Mickiewicza W Posnaniu,
- Harris, J. (1988). Peter Trudgill, *Dialects in contact*. Oxford: Blackwell, 1986. Pp. viii+ 174. *Journal of Linguistics*, 24(1), 227-232.
- Heid, S., & Hawkins, S. (2000). An acoustical study of long-domain/r/and/l/coarticulation. Proceedings of the 5th seminar on speech production: Models and data,
- Heselwood, B., & Plug, L. (2011). The Role of F2 and F3 in the Perception of Rhoticity: Evidence from Listening Experiments. ICPhS,
- Heselwood, B., Plug, L., & Tickle, A. (2010). Assessing rhoticity using auditory, acoustic and psycho-acoustic methods. In B. Heselwood & C. Upton (Eds.), (pp. 331 - 340): Peter Lang.
- Hewings, M. (2007). *English Pronunciation in Use Advanced Book with Answers and 5 Audio CDs*. Cambridge University Press. <https://books.google.co.uk/books?id=NNdyJjsi41wC>
- Hirson, A., & Sohail, N. (2007). Variability of rhotics in Punjabi-English bilinguals. 16th International Congress of Phonetic Sciences (ICPhS),
- Holmes, J., & Wilson, N. (2017). *An Introduction to Sociolinguistics*. Taylor & Francis. <https://books.google.co.uk/books?id=SC8IDwAAQBAJ>
- Hughes, A., Trudgill, P., & Watt, D. (2012). *English Accents and Dialects: An Introduction to Social and Regional Varieties of English in the British Isles*.(5th edn.) London: Hodder Education.
- IELTS. (2019). *IELTS for migration*. Retrieved 05.04.2019 from <https://www.ielts.org/about-ielts/ielts-for-migration>
- Irvine, J. T., Gal, S., & Kroskrity, P. V. (2009). Language ideology and linguistic differentiation. *Linguistic anthropology: A reader*, 1, 402-434.
- Jauriberry, T., Sock, R., & Hamm, A. (2015). Phonetic variation in Standard Scottish English: Rhotics in Dundee. ICPhS,
- Jaworski, S. (2010). Phonetic realisations of the Polish rhotic in intervocalic position: a pilot study. *Annales neophilologiarum*, 4, 125-140.
- Jaworski, S., & Gillian, E. (2011). On the phonetic instability of the Polish rhotic/r. *Poznań Studies in Contemporary Linguistics PSiCL*, 47, 380.
- Jenkins, J. (2000). *The Phonology of English as an International Language*. Oxford University Press. <https://books.google.co.uk/books?id=luIEnwEACAAJ>
- Jia, G., Strange, W., Wu, Y., Collado, J., & Guan, Q. (2006). Perception and production of English vowels by Mandarin speakers: Age-related differences vary with amount of L2 exposure. *The Journal of the Acoustical Society of America*, 119(2), 1118-1130.

- Jilka, M. (2009). Assessment of phonetic ability. In G. Dogil & S. Reiterer (Eds.), *Language Talent and Brain Activity*. De Gruyter Mouton.
- Johnson, K. (2011). *Acoustic and Auditory Phonetics*. Wiley. <https://books.google.ie/books?id=sKOUKJXbmYMC>
- Johnstone, B. (2009). Pittsburghese shirts: Commodification and the enregisterment of an urban dialect. *American Speech*, 84(2), 157-175.
- Johnstone, B. (2010). Locating language in identity. In C. L. a. D. Watt (Ed.), *Language and identities* (pp. 29-36). Edinburgh University Press.
- Johnstone, B., Andrus, J., & Danielson, A. E. (2006). Mobility, indexicality, and the enregisterment of "Pittsburghese". *Journal of English linguistics*, 34(2), 77-104.
- Johnstone, B., & Kiesling, S. F. (2008). Indexicality and experience: Exploring the meanings of /aw/-monophthongization in Pittsburgh. *Journal of sociolinguistics*, 12(1), 5-33.
- Jones, D. (1909). *The pronunciation of English*. Cambridge: Cambridge University Press.
- Jones, D. (2018). *An Outline of English Phonetics... With 131 Illustrations*. Creative Media Partners, LLC. <https://books.google.co.uk/books?id=TGzVvQEACAAJ> (1918)
- Joseph, J. E. (2010). Identity. In C. L. a. D. Watt (Ed.), *Language and identities* (pp. 9-17). Edinburgh University Press.
- Kachru, B. B. (1992). *The other tongue: English across cultures*. University of Illinois Press.
- Kelly, J., & Local, J. (1986). Long-domain resonance patterns in English. International conference on speech input/output; techniques and applications,
- Kerswill, P. (1994). *Dialects converging: Rural speech in urban Norway*. Oxford University Press on Demand.
- Kerswill, P. (2014). The objectification of 'Jafaican': the discursal embedding of Multicultural London English in the British media. *Mediatization and sociolinguistic change*, 428-455.
- Kiesling, S. F. (2005). Variation, stance and style: Word-final-er, high rising tone, and ethnicity in Australian English. *English World-Wide*, 26(1), 1-42.
- Kiesling, S. F. (2011). *Linguistic variation and change*. Edinburgh University Press.
- Klein, H. B., Grigos, M. I., McAllister Byun, T., & Davidson, L. (2012). The relationship between inexperienced listeners' perceptions and acoustic correlates of children's /r/ productions. *Clinical Linguistics & Phonetics*, 26(7), 628-645.
- Knight, R. A. (2008). *The acquisition of Standard British English rhotics: production and perception data*:
- Non-Technical Summary (Research summary)*. ESRC.
- Knight, R. A., Dalcher, C. V., & Jones, M. J. (2007). A real-time case study of rhotic acquisition in Southern British English. Proceedings of the 16th International Congress of Phonetic Sciences,
- Kozminska, K. (2016). *Language and identity in a transnational context: A sociophonetic study of the Polish of a group of migrants living in the UK* [University of Oxford].
- Kozminska, K. (2020). Sounding Out Difference: Polycentricity of Ideological Orientations among Polish-Speaking Migrants in Transnational Timespace. *Journal of linguistic anthropology*, 30(3), 412-437.
- Kreidler, C. W. (2008). *The pronunciation of English: a course book*. John Wiley & Sons.
- Kuhl, P. K. (2000). A new view of language acquisition. *Proceedings of the National Academy of Sciences*, 97(22), 11850-11857.
- Labov, W. (1972). *Sociolinguistic Patterns*. University of Pennsylvania Press, Incorporated.

- Labov, W. (1990). The intersection of sex and social class in the course of linguistic change. *Language Variation and Change*, 2(2), 205-254.
- Labov, W. (2001). The anatomy of style-shifting. In Penelope Eckert & J. R. Rickford (Eds.), *Style and Sociolinguistic Variation*. Cambridge University Press.
- Labov, W. (2004). Ordinary events. *Sociolinguistic variation: Critical reflections*, 31-43.
- Ladefoged, P. (2003). *Phonetic Data Analysis: An Introduction to Fieldwork and Instrumental Techniques*. Wiley. <https://books.google.ie/books?id=mdvtnQEACAAJ>
- Ladefoged, P., & Disner, S. F. (2012). *Vowels and consonants*. John Wiley & Sons.
- Ladefoged, P., & Johnson, K. (2014). *A Course in Phonetics*. Cengage Learning. <https://books.google.ie/books?id=U4XaAgAAQBAJ>
- Ladefoged, P., & Maddieson, I. (1996). *The Sounds of the World's Languages*. Wiley. https://books.google.co.uk/books?id=h1byJz_rWUcC
- Laver, J. (1994). *Principles of phonetics*. Cambridge University Press.
- Lavrakas, P. J. (2008). *Encyclopedia of survey research methods*. Sage publications.
- Lawson, Scobbie, & Stuart-Smith. (2011). The social stratification of tongue shape for postvocalic /r/ in Scottish English. *Journal of sociolinguistics*, 15(2), 256-268.
- Lawson, E., Scobbie, J., & Stuart-Smith, J. (2015). The role of anterior lingual gesture delay in coda/r/lenition: an ultrasound tongue imaging study.
- Lawson, E., Scobbie, J. M., & Stuart-Smith, J. (2013). Bunched/r/promotes vowel merger to schwar: An ultrasound tongue imaging study of Scottish sociophonetic variation. *Journal of Phonetics*, 41(3-4), 198-210.
- Lawson, E., Scobbie, J. M., & Stuart-Smith, J. (2011). The social stratification of tongue shape for postvocalic /r/ in Scottish English. *Journal of sociolinguistics*, 15(2), 256-268.
- Lenneberg, E. H. (1967). The biological foundations of language. *Hospital Practice*, 2(12), 59-67.
- Lennon, R., Smith, R., & Stuart-Smith, J. (2015). An Acoustic Investigation of Postvocalic/r/Variants in Two Sociolects of Glaswegian.
- Leschke, J., & Weiss, S. (2020). With a little help from my friends: Social-network job search and overqualification among recent intra-EU migrants moving from east to west. *Work, Employment and Society*, 34(5), 769-788.
- Levon, E., Sharma, D., Watt, D. J., Cardoso, A., & Ye, Y. (2021). Accent Bias and Perceptions of Professional Competence in England. *Journal of English linguistics*, 49(4), 355-388.
- Lewis-Beck, M., Bryman, A. E., & Liao, T. F. (2003). *The Sage encyclopedia of social science research methods*. Sage Publications.
- Lindau, M. (1978). Vowel Features. *Language*(54(3)), 541-563. <https://doi.org/doi:10.2307/412786>
- Lindau, M. (1980). The story of /r/. *The Journal of the Acoustical Society of America*, 67(S1), S27-S27. <https://doi.org/10.1121/1.2018134>
- Lindau, M. (1985). The story of /r/. In V. A. Fromkin (Ed.), *Phonetic Linguistics: Essays in honor of Peter Ladefoged* (pp. 157-168). Orlando, FA: Academic Press.
- Lindsey, G. (2012a, 05.06.20). STRUT for Dummies *Speech Talk - thoughts on English, speech & language*. <https://www.englishspeechservices.com/blog/strut-for-dummies/>
- Lindsey, G. (2012b, 23.11.19). Vodka martini – bunched, not curled. *Speech Talk - thoughts on English, speech & language*. <https://www.englishspeechservices.com/blog/vodka-martini-bunched-not-curved/>
- Lindsey, G. (2013, 23.11.19). Linking r. *Speech Talk - thoughts on English, speech & language*. <https://www.englishspeechservices.com/blog/linking-r/>

- Lipiec, D., & Więcek-Poborczyk, I. (2018). NORMATYWNE I NIENORMATYWNE REALIZACJE FONEMU /R/ WE WSPÓŁCZESNYM JĘZYKU POLSKIM. *Pod redakcją Sławomira Śniatkowskiego Danuty Emiluty-Rozya*, 216.
- Llamas, C., Watt, D., & Johnson, D. E. (2009). Linguistic accommodation and the salience of national identity markers in a border town. *Journal of Language and Social Psychology*, 28(4), 381-407.
- Łobacz, P. (2000). The Polish rhotic. A preliminary study in acoustic variability and invariance. *Speech and Language technology*, 4.
- Love, J., & Walker, A. (2013). Football versus football: Effect of topic on /r/ realization in American and English sports fans. *Language and Speech*, 56(4), 443-460. <https://doi.org/10.1177/0023830912453132>
- Lybeck, K. (2002). Cultural identification and second language pronunciation of Americans in Norway. *The Modern Language Journal*, 86(2), 174-191.
- MacIntyre, P. D., MacKinnon, S. P., & Clément, R. (2009). The baby, the bathwater, and the future of language learning motivation research. *Motivation, language identity and the L2 self*, 43-65.
- Macrae, C. N., Stangor, C., & Hewstone, M. (1996). *Stereotypes and Stereotyping*. Guilford Publications. <https://books.google.pl/books?id=o2EVqBMpJDEC>
- Maguire, W. (2017). Variation and change in the realization of /r/ in an isolated Northumbrian dialect. *Language and a Sense of Place: Studies in Language and Region*, 87-103.
- Major, R. C. (2001). *Foreign accent: The ontogeny and phylogeny of second language phonology*. Routledge.
- Meer, P., Fuchs, R., Gerfer, A., Gut, U., & Li, Z. (2021). Rhotics in Scottish Standard English. *Engl. World-Wide*, 42(2).
- Michalak-Widera, I. (2010). Rotacyzm u osób dorosłych—zagadnienia teoretyczne i praktyka logopedyczna.,,.
- Mielke, J., Baker, A., & Archangeli, D. (2010). Variability and homogeneity in American English /r/ allophony and /s/ retraction. *Laboratory phonology*, 10, 699-730.
- Mielke, J., Baker, A., & Archangeli, D. (2016). Individual-level contact limits phonological complexity: Evidence from bunched and retroflex /ɹ/. *Language*, 92(1), 101-140.
- Mieszkowicz, M. (n.d.). *Rotacyzm - rerańie*. poradnik-logopedyczny.pl. Retrieved 19.01.20 from <http://poradnik-logopedyczny.pl/wady-wymowy/rozpoznanie-i-korekcja/32/rotacyzm-reranie.html>
- Milroy, J., & Milroy, L. (1999). Authority in Language: investigating standard English.
- Moyer, A. (1999). Ultimate attainment in L2 phonology: The critical factors of age, motivation, and instruction. *Studies in Second Language Acquisition*, 21(1), 81-108.
- Munro, M. J. (2008). Foreign accent and speech intelligibility. *Phonology and second language acquisition*, 5, 193-218.
- Munro, M. J., & Derwing, T. M. (1994). Evaluations of foreign accent in extemporaneous and read material. *Language Testing*, 11(3), 253-266.
- Munro, M. J., & Derwing, T. M. (1995). Foreign Accent, Comprehensibility, and Intelligibility in the Speech of Second Language Learners. *Language Learning*, 49, 285-310.
- n/a. (2018). *Audacity®*. In Audacity Team. <http://audacityteam.org/>
- n/a. (n.d.). *Dlaczego głoska "r" jest trudna do wymówienia?* Polski Związek Logopedów. Retrieved 19.01.20 from <https://logopeda.org.pl/subpage.php?id=14>

- Newlin-Lukowicz, L. (2015). *Ethnicity, L1 interference, and sound change in New York City* [New York University].
- Newlin-Łukowicz, L. (2015). Ethnic orientation without quantification: How life “on the hyphen” affects sociolinguistic variation. *University of Pennsylvania Working Papers in Linguistics*, 21(2), 16.
- Nichols, J. C., & Tanksley, C. B. (2004). Revelations of African-American women with terminal degrees: Overcoming obstacles to success. *Negro Educational Review*, 55(4), 175-185.
- Ogiermann, E. (2009). Politeness and in-directness across cultures: A comparison of English, German, Polish and Russian requests.
- Ostaszewska, D., & Tambor, J. (2000). *Fonetyka i fonologia współczesnego języka polskiego*. Wydawn. Nauk. PWN.
- Oxford, R. L. (1999). Anxiety and the language learner: New insights. *Affect in language learning*, 58, 67.
- Perkell, J. S., Guenther, F. H., Lane, H., Matthies, M. L., Perrier, P., Vick, J., . . . Zandipour, M. (2000). A theory of speech motor control and supporting data from speakers with normal hearing and with profound hearing loss. *Journal of Phonetics*, 28(3), 233-272.
- Piske, T., MacKay, I. R., & Flege, J. E. (2001). Factors affecting degree of foreign accent in an L2: A review. *Journal of Phonetics*, 29(2), 191-215.
- Piske, T., MacKay, I. R. A., & Flege, J. E. (2001). Factors affecting degree of foreign accent in an L2: a review. *Journal of Phonetics*, 29, 191 – 215.
- Pot, A., Keijzer, M., & de Bot, K. (2018). Do low L2 abilities impede healthy aging for migrant older adults in the Netherlands? *Dutch Journal of Applied Linguistics*, 7(1), 109-120.
- Przedlacka, J. (2002). *Estuary English?* Peter Lang. <https://www.peterlang.com/view/title/31107>
- Rampton, B. (1999). Crossing. *Journal of linguistic anthropology*, 9(1/2), 54-56. <http://www.jstor.org/stable/43102425>
- Recasens, D. (1991). On the production characteristics of apicoalveolar taps and trills. *Journal of Phonetics*, 19(3-4), 267-280.
- Reichert, M. (2005). English in Poland. *World Englishes*, 24(2), 217-226.
- Rindal, U. (2010). Constructing identity with L2: Pronunciation and attitudes among Norwegian learners of English 1. *Journal of sociolinguistics*, 14(2), 240-261.
- Roach, P., Hartman, J., & Setter, J. (2003). *English pronouncing dictionary*. Cambridge University Press.
- Romaine, S. (1978). Post-vocalic /r/ in Scottish English: Sound change in progress? In P. Trudgill (Ed.), *Sociolinguistic Patterns in British English*. (pp. 144-158). Edward Arnold.
- Rosewarne, D. (1994). Estuary English: tomorrow's RP? *English today*, 10(1), 3-8.
- Ryan, S. D. (2018). *Language, migration and identity at school: A sociolinguistic study with Polish adolescents in Glasgow* [University of Glasgow].
- Ryan, S. D. (2021). “I just sound Sco [?] ish now”: The acquisition of word-medial glottal replacement by Polish adolescents in Glasgow. *English World-Wide*, 42(2), 145-174.
- Ryfa, J. (2012). Englishes of London and the Southeast of England. In T. Hopkins, K. Decker, & J. McKenny (Eds.), *World Englishes* (Vol. 1, pp. 31-91). Bloomsbury.
- Rzepnikowska, A. (2019). Racism and xenophobia experienced by Polish migrants in the UK before and after Brexit vote. *Journal of Ethnic and Migration Studies*, 45(1), 61-77.

- Schützler, O. (2010). Variable Scottish English Consonants: The Cases of /m/ and Non-Prevocalic /r/. *Research in language*, 8, 1-17.
- Schwartz, G. (2017). The perception of sandhi-blocking in Polish vowel-initial words. *Folia Linguistica*, 51. <https://doi.org/10.1515/flin-2017-0025>
- Scobbie, J. M., Lawson, E., Nakai, S., Cleland, J., & Stuart-Smith, J. (2015). Onset vs. coda asymmetry in the articulation of English /r/.
- Scott, T. (2013). *Why Jonathan Ross Can't Pronounce His Rs*. <https://www.youtube.com/watch?v=ld3A3QCpXd4>
- Scovel, T. (1988). *A time to speak: A psycholinguistic inquiry into the critical period for human speech*. Wadsworth Publishing Company.
- Seliger, H. W. (1978). Implications of a multiple critical periods hypothesis for second language learning. *Second language acquisition research: Issues and implications*, 11-19.
- Selinker, L., & Gass, S. M. (2008). Second language acquisition. *Lawrence Erlbaum Ass.*
- Selkirk, E. O. (2020). English compounding and the theory of word structure. In *The scope of lexical rules* (pp. 229-278). De Gruyter Mouton.
- Sharma, D. (2005). Dialect stabilization and speaker awareness in non-native varieties of English 1. *Journal of sociolinguistics*, 9(2), 194-224.
- Sharma, D. (2011). Style repertoire and social change in British Asian English. *Journal of sociolinguistics*, 15(4), 464-492.
- Sharma, D. (2021). 11 Biographical Indexicality: Personal History as a Frame of Reference for Social Meaning in Variation. *Social Meaning and Linguistic Variation: Theorizing the Third Wave*, 243.
- Sharma, D., & Sankaran, L. (2011). Cognitive and social forces in dialect shift: Gradual change in London Asian speech. *Language Variation and Change*, 23(3), 399-428.
- Shockey, L. (2008). *Sound patterns of spoken English*. John Wiley & Sons.
- Silverstein, M. (2003). Indexical order and the dialectics of sociolinguistic life. *Language & Communication*, 23(3), 193-229.
- Sobkowiak, W. (2008). *English phonetics for Poles: a resource book for learners and teachers*. Wydawnictwo Poznańskie. <https://books.google.pl/books?id=cANNPwAACAAJ>
- Spiewak, G., & Golebiowska, L. (2001). Polish speakers. In M. Swan & B. Smith (Eds.), *Learner English: A Teacher's Guide to Interference and Other Problems* (pp. 162-178). Cambridge University Press. <https://books.google.ie/books?id=6UluWj9fQfQC>
- Stolarski, Ł. (2013a). Articulation of the Polish /r/ in the intervocalic position. *Language, Thought and Education: Across Systems*. Zielona Góra: Oficyna Wydawnicza Uniwersytetu Zielonogórskiego, 21-35.
- Stolarski, Ł. (2013b). Tap as the basic allophone of the Polish rhotic. *Linguistica Silesiana*, 34.
- Stolarski, Ł. (2015). Further Analysis of the Articulation of /r/ in Polish--the Postconsonantal Position. *SKY Journal of Linguistics*, 28.
- Stølen. (1987). The Effect of Affect on Interlanguage Phonology. In G. W. Ioup, S.H. (Ed.), *Interlanguage Phonology: the acquisition of a second language sound system*. Newbury House.
- Strutyński, J. (2006). *Gramatyka polska*. Wydawnictwo Tomasz Strutyński. <https://books.google.co.uk/books?id=dxDQGQAACAAJ>
- Stuart-Smith, J. (2007). A sociophonetic investigation of postvocalic /r/ in Glaswegian adolescents. *Proc. ICPhS, Saarbrücken*.

- Stuart-Smith, J., Lawson, E., & Scobbie, J. M. (2014). Derhoticisation in Scottish English. *Advances in sociophonetics*, 15, 59-96.
- Stuart-Smith, J., Timmins, C., Alam, F., Gregersen, F., Parrot, J., & Quist, P. (2011). Hybridity and ethnic accents. *Selected Papers ICLaVE Amsterdam: Benjamins*, 5, 43-57.
- Szombatová, V. (2016). The semi-structured interview in foreign language education research. The International Conference on Language and Literature in Education and Research 2016,
- Szpyra-Kozłowska, J. (2018). The rhotic in fake and authentic Polish-accented English. *Lublin Studies in Modern Languages and Literature*, 42(1), 81-102.
- Szpyra, J. (2014). *Pronunciation in EFL instruction* (Vol. 82). Multilingual Matters.
- Terry, G., Hayfield, N., Clarke, V., & Braun, V. (2017). Thematic analysis. *The SAGE handbook of qualitative research in psychology*, 2, 17-37.
- Thorne, S. (2013). West Midlands English. In T. Hopkins, K. Decker, & J. McKenny (Eds.), *World Englishes* (Vol. 1, pp. 137-164). Bloomsbury.
- Titley, G., & Kerr, A. (2016). Polish migrants and media transnationalism. In *Globalization, Migration and Social Transformation* (pp. 213-224). Routledge.
- Trevena, P., McGhee, D., & Heath, S. (2013). Location, location? A critical examination of patterns and determinants of internal mobility among post-accession Polish migrants in the UK. *Population, Space and Place*, 19(6), 671-687.
- Trofimovich, P., & Baker, W. (2007). Learning prosody and fluency characteristics of second language speech: The effect of experience on child learners' acquisition of five suprasegmentals. *Applied Psycholinguistics*, 28(2), 251-276.
- Trudgill, P. (2000a). *The Dialects of England*. Wiley. <https://books.google.co.uk/books?id=LSzNMXRwi2EC>
- Trudgill, P. (2000b). *Sociolinguistics: An Introduction to Language and Society*. Penguin Books Limited. <https://books.google.co.uk/books?id=X7Y7DYlQu8QC>
- Trudgill, P., & Trudgill, S. (1974). *The social differentiation of English in Norwich* (Vol. 13). CUP Archive.
- Twist, A., Baker, A., Mielke, J., & Archangeli, D. (2007). Are "Covert"/ɹ/Allophones Really Indistinguishable? *University of Pennsylvania Working Papers in Linguistics*, 13(2), 16.
- Urponen, M. I. (2004). *Ultimate attainment in postpuberty second language acquisition*. Boston University.
- Wagner, S. (2012). South West English. *World Englishes: The British Isles*, 1, 167-188.
- Waniek-Klimczak, E. (2009). *Socio-psychological conditioning in ESL Pronunciation: Consonant voicing in English spoken by Polish immigrants to Britain*. WYDAWNICTWO PAŃSTWOWEJ WYŻSZEJ SZKOŁY ZAWODOWEJ WE WŁOCŁAWKU.
- Waniek-Klimczak, E., & Matysiak, A. (2016). POLES IN THE UK: RHOTICITY REVISITED. *ACCENTS 2016*.
- Waniek-Klimczak, E., & Zając, M. (2017). Variable Rhoticity in L2 English: The case of Polish advanced learners. *EPIP5 English Pronunciation: Issues & Practices*, 38.
- Wei, L., Milroy, L., & Ching, P. S. (1992). A two-step sociolinguistic analysis of code-switching and language choice: the example of a bilingual Chinese community in Britain. *International Journal of Applied Linguistics*, 2(1), 63-86.
- Wells, J. C. (1982). *Accents of English*. Cambridge University Press. <https://books.google.co.uk/books?id=a3-EIL71fikC>
- Wells, J. C. (1982). *Accents of English I: An Introduction*. Cambridge University Press.

- Wells, J. C. (2008). Longman Pronunciation Dictionary. In <https://books.google.pl/books?id=WKIV967F1n4C>
- Wells, J. C. (2010, 08.02.19). bunched/molar r *John Wells's phonetic blog*. <http://phonetic-blog.blogspot.com/2010/02/bunchedmolar-r.html>
- Wells, J. C. (2011, 23.11.19). Wringing the changes *John Wells's phonetic blog*. <http://phonetic-blog.blogspot.com/2011/04/wringing-changes.html>
- Wells, J. C. (2014). *Sounds Interesting*. Cambridge University Press. <https://books.google.co.uk/books?id=IfpkBAAQBAJ>
- Westbury, J. R., Hashi, M., & Lindstrom, M. J. (1998). Differences among speakers in lingual articulation for American English /j/. *Speech Communication*, 26(3), 203-226.
- Wierzchowska, B. (1971). *Wymowa polska*. Państwowe Zakłady wydawnictw szkolnych.
- Wiese, R. (2011). The Representation of Rhotics. In *The Blackwell Companion to Phonology* (Vol. 1, pp. 711-729): John Wiley & Sons, 2011.
- Williams, A., & Kerswill, P. (1999). Dialect levelling: change and continuity in Milton Keynes, Reading and Hull. *Urban voices: Accent studies in the British Isles*, 141-162.
- Yeni-Komshian, G. H., Flege, J. E., & Liu, S. (2000). Pronunciation proficiency in the first and second languages of Korean-English bilinguals. *Bilingualism: Language and cognition*, 3(2), 131-149.
- Zajac, M. (2016). Rhoticity and /r/ quality in the speech of L2 learners of English. In: PLM.
- Zajac, M., & Rojczyk, A. (2017a, June 2017). *Realisation of /r/ in the speech of Polish learners of English: An examination of L1 and L2 productions* Approaches to Phonetics and Phonology Conference, Lublin.
- Zajac, M., & Rojczyk, A. (2017b). Realisation of /r/ in the speech of Polish learners of English: An examination of L1 and L2 productions. BOOK OF ABSTRACTS,
- Zhou, X., Espy-Wilson, C. Y., Boyce, S., Tiede, M., Holland, C., & Choe, A. (2008). A magnetic resonance imaging-based articulatory and acoustic study of "retroflex" and "bunched" American English /r/. *The Journal of the Acoustical Society of America*, 123(6), 4466-4481.
- Zhou, X., Espy-Wilson, C. Y., Tiede, M., & Boyce, S. (2007). An articulatory and acoustic study of "retroflex" and "bunched" American English rhotic sound based on MRI. Eighth Annual Conference of the International Speech Communication Association,
- Zuengler, J. (1988). Identity markers and L2 pronunciation. *Studies in Second Language Acquisition*, 10(01), 33-49.
- Zuengler, J. (1991). Accommodation in native-nonnative interactions: Going beyond the "what" to the "why" in second language research. *Contexts of accommodation: Developments in applied sociolinguistics*, 223-244.

Appendices

Appendix I: Data Collection Tools

Information for Participants/Consent Form

This study collects information on Polish immigrants in the UK. I understand that by completing and returning this consent form, I am giving consent for my responses to be used for the purposes of Jan Trębacz's research project. I also understand that I have the right to withdraw from the study at any time.

.....

date and signature

Semi-Structured Interview Questions

1. What jobs have you had since you moved to the UK?
2. When talking to a stranger, e.g. in a shop, can you tell if they are from Poland?
How?
3. When talking to a stranger, e.g. in a shop, are *you* instantly recognised as Polish?
How?
4. What is your general opinion on the English of Polish people living in the UK?
5. How do other people feel about *your* English? What feedback/comments do you usually get (if any)?
6. Have there been any particular people or events in your life who/which might have influenced your English?

The Questionnaire

Please answer the following questions. All information provided will be treated as confidential, and no names will be revealed in the final report. There are no right or wrong answers - please try to answer the following questions as honestly as possible. All information collected by this questionnaire will only be used for the purpose of Jan Trębacz's research.

1. General

1.1. Name

1.2. Contact email:

.....

1.3. Age:

.....

.....

1.4. Gender: male/ female

1.5. Education:

a. What is the highest educational qualification that you have?

Matura/ Bachelor's degree/ Master's degree/ PhD

b. Where did you obtain it?

Poland/ UK/ Other (please specify)

c. What subject did you graduate in?

.....

.....

d. Are you studying now? Yes/ No

e. If so, what are you studying?

.....

f. Are you in full time or part time education? full time/ part time

1.6. Current

job/occupation:.....

.....

1.7. When did you move to the UK?

(month + year)

.....
.....

2. English proficiency

2.1. Did you ever attend formal English classes in Poland? yes/ no

2.2. How old were you when you first started formal instruction in English?

.....
.....

2.3. How many years of English instruction did you have:

Age	How many years
Up to the age of 12	
Between the ages 13 and 19	
After the age of 19	

2.4. Have you ever attended formal English classes in the UK? yes/ no

2.5. If yes, then for how many months/years?

.....

2.6. How would you assess your level of English upon arrival in England?

- a.) No English at all
- b.) Only a couple of words and phrases, not really enough to communicate
- c.) Basic, but enough to communicate in *some* situations
- d.) Not very fluent, but enough to communicate in *most* situations
- e.) *Fairly* fluent and enough to communicate in most situations
- f.) Fluent, very few communication problems
- g.) Very fluent, no communication problems

2.7. How would you assess your level of English now?

- a.) No English at all

- b.) Only a couple of words and phrases, not really enough to communicate
- c.) Basic, but enough to communicate in *some* situations
- d.) Not very fluent, but enough to communicate in *most* situations
- e.) *Fairly* fluent and enough to communicate in most situations
- f.) Fluent, very few communication problems
- g.) Very fluent, no communication problems

3. Polish /English use

3.1. In general, which option best describes how much you use English and Polish **in a typical week?**

- a) 100% Polish, 0% English
- b) 75% Polish, 25% English
- c) 50% Polish, 50% English
- d) 25% Polish, 75% English
- e) 0% Polish, 100% English

3.2. What language do you normally **think**/rehearse important conversations/**talk to yourself** in? If you use more than one language, please provide percentage, e.g. English 60%, Polish 40%.

.....

3.3. In what language do you typically use the following? Please estimate percentage:

	Polish	English	Other language(s)
Listen to music			
Listen to the news			
Watch films & TV (entertainment) programmes			

Use social media			
------------------	--	--	--

3.4. On average, how many weeks a year do you spend in Poland?

(weeks per year).....

3.5. Which of the statements below best describes your plans?

- a. I plan to stay permanently in the UK
- b. I plan to return to Poland permanently at some point, but not sure when yet.
- c. I plan to return to Poland permanently within the next 10 years.
- d. I plan to return to Poland permanently within the next 2 years.
- e. I don't have plans at the moment

4. Other

This section contains 40 statements on the English language and migration. Please tick the relevant box to indicate how much you agree Or disagree with each statement .

		strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	I try to speak English as much as possible in order to improve.						
2	I would like to sound more like the English because this would allow me to feel more at ease among them.						
3	I enjoy learning about English culture, heritage and traditions.						
4	I wish I could speak more foreign languages.						
5	I often feel nervous when I speak English.						
6	Knowing lots of words in English is more important than having a good knowledge of English grammar.						
		strongly	moderately	slightly	slightly	moderately	strongly

		disagree	disagree	disagree	agree	agree	agree
7	I enjoy listening to people with the “BBC English” accent.						
8	Writing in English is more difficult for me than speaking English.						
9	Even when I speak English, it is important for me to sound like a Polish person.						
10	In general, I don’t like English culture very much.						
11	I don’t understand why some people get anxious about speaking English.						
12	I enjoy listening to people with an American accent.						
		strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
13	Getting a good job is impossible if you make lots of grammatical mistakes in English.						
14	People who speak with an American accent sound better than those with other accents.						
15	I enjoy working on my English.						
16	If I moved to another country, I wouldn’t make the effort to learn their language.						
17	I’d like to have no foreign accent because this could be helpful in socialising with English people.						
18	Working on my English can be satisfying.						
19	I am not interested in improving my English grammar as long as people can understand me.						
20	I would like to improve my English grammar because this would help me get a better job.						
		strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree

2 1	The more I get to know English people, the more I like them.						
2 2	I find the sound of “BBC English” accent annoying.						
2 3	I work on improving my English.						
2 4	I feel very self-conscious when I speak English.						
2 5	People who speak with a “BBC English” accent sound better than those with other accents.						
2 6	I’d rather I didn’t have a foreign accent because it would help my in my career development.						
2 7	I don’t make a conscious effort to improve my English.						
2 8	I generally like English people.						
		strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
2 9	I usually find working on my English frustrating.						
3 0	In my opinion, English people can be proud of their culture.						
3 1	I enjoy learning about different language and cultures.						
3 2	I would like to be able to speak English with no Polish accent.						
3 3	I am not interested in losing my Polish accent in order to feel like I fit in.						
3 4	If I made fewer grammatical mistakes, English people would respect me more.						
		strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
3 5	I am not interested in giving up my Polish accent as long as people can understand me.						
3	English people may seem polite, but they are						

6	really cold and distant.						
3	I'd like to have no foreign accent because it						
7	would be helpful in terms of employment						
	opportunities.						
3							
8	I don't like reading in English.						
3	I would like to be mistaken for a native English						
9	speaker over the phone.						
4							
0	I find American accents annoying.						

Thank you very much for your contribution – your help is much appreciated!

Speech Elicitation - Reading Passage

Car Alarm

It was a dark December afternoon in a quiet suburb. For the last couple of days it had been getting a bit warmer, so the snow finally decided to start thawing out. Still, the air felt cold. It was only four o'clock, but it was darker than usual. Although a storm would be rare this time of year, it felt like one was on its way.

The term had just finished. As always, it was a joyful occasion for every student and lecturer, despite the fact that for the latter it simply meant more time for marking, report writing, planning and resource preparation. The members of my family were quietly going about their business, allowing me to catch up on work. My son Robert, a keen comic book reader, was drawing a green star which, as far as I knew, was supposed to be the Hulk. My daughter Anna was doing homework on famous explorers, while playing with a fork that someone had forgotten to clear away. Although my wife had already called to tell me she would return home soon, there was no sign of her yet.

I had no excuse not to do my marking, but I couldn't really focus on the here and now. I'd much rather have been watching Winter Olympics, even though I couldn't care less about sports. I would sometimes watch a game of football in a pub while having a beer with my mates, but I could never even remember the score. Still, this was the weird effect working from home had on me – anything seemed exciting in comparison.

Suddenly, a car alarm went off somewhere near. It kept ringing in my ears, so after a while I got off my chair. Was someone trying to get into our new car? "I can't even remember where it is parked," I thought. Even though it was an expensive car, it was a sympathy gift from my partners' parents for her and me, which is why I didn't have much love for it. Still, I felt like I should go and check. The very idea of it annoyed me, yet I ran down the stairs and put on my

old fur coat. Before I left, I remembered to grab a torch. In the distance, I could hear the thunder roar.

The car alarm would not shut up; it sounded like my car was being tortured or maybe even murdered. It wouldn't be easy to find it in the dark, yet I couldn't give up, mostly because of the fear of my in-laws' reaction if the car was stolen. It couldn't have been far, as I could hear it louder now.

I saw it ten seconds later. The car was under a tree, where my wife must have parked it the night before. "There you are!" I thought. Just as I had expected, someone was there, trying to unlock the door. The man was bigger than me, with fair hair and a scarf around his neck. 'Sir, step aside from the car!' I shouted. The man slowly reared his head, but did not stop trying to open the lock. There and then, I lost it. I roared at him, too angry for words. In a blur, I jumped forward and slapped the man hard on the cheek. He tried to push me away, but I managed to get hold of his ear. My grip was firmer than necessary, but I could feel anger burn inside me. "Oh, lord! My ear!" - the man gave a sharp cry. "What the hell are you doing with my car?" I demanded. "Err... your car"? Now that I had a clearer view of the man, with horror I recognised my neighbour Roger...

"Your car is over there, you idiot!" he pointed angrily. "Sorry..."- I said, and smiled sweetly attempting to restore some of my dignity. "Could we please agree to pretend that this has never happened? After all, 'to err is human', as they say..."

Speech Elicitation – Word List (Non-randomised)

1	air	51	number	101	rare	151	regard	201	servers
2	ear	52	paper	102	rear	152	restart	202	surfers
3	err	53	later	103	roar	153	recharge	203	quarters
4	are	54	wonder	104	rears	154	remark	204	murdered
5	or	55	future	105	reared	155	reform	205	mergers
6	fair	56	longer	106	roared	156	report	206	workers
7	bear	57	speaker	107	roars	157	resource	207	burgers
8	bare	58	bigger	108	carer	158	resort	208	lurkers
9	chair	59	stairs	109	fairer	159	river	209	farmers
10	share	60	shared	110	bearer	160	rubber	210	carvers
11	dare	61	scarce	111	nearer	161	rover	211	barbers
12	care	62	weird	112	clearer	162	Roger	212	partners
13	hair	63	ears	113	dearer	163	roller	213	chartered
14	scare	64	fierce	114	stirrer	164	reader	214	Arthur's
15	fear	65	term	115	transferor	165	rocker	215	markers
16	beer	66	serve	116	scorer	166	ringer	216	parkers
17	pier	67	verb	117	explorer	167	ranker	217	starkers
18	dear	68	learn	118	restorer	168	reverb	218	formers
19	near	69	third	119	manufacturer	169	ringworm	219	absorbers
20	cheer	70	burn	120	lecturer	170	Robert	220	corners
21	here	71	work	121	caterer	171	Richard	221	porters
22	gear	72	Kirk	122	carers	172	rivers	222	tortured
23	hear	73	jerk	123	bearers	173	roadwork	223	yorkers
24	per	74	farm	124	stirrers	174	server	224	corkers
25	fur	75	sharp	125	transferors	175	firmer	225	forkers
26	spur	76	scarf	126	scorers	176	fervour	226	thawing
27	sir	77	start	127	explorers	177	quarter	227	withdrawal
28	stir	78	hard	128	restorers	178	further	228	drawing
29	blur	79	large	129	manufacturers	179	murder	229	awesome
30	her	80	mark	130	lecturers	180	worker	230	cooling
31	cur	81	park	131	caterers	181	burger	231	fall
32	far	82	dark	132	repair	182	lurker	232	fault
33	bar	83	form	133	revere	183	farmer	233	feel
34	mar	84	storm	134	refer	184	harbour	234	fill
35	star	85	dwarf	135	rapport	185	barber	235	fighting
36	jar	86	sort	136	rebore	186	Arthur	236	feeling
37	tar	87	lord	137	restore	187	larger	237	filling
38	car	88	north	138	rehear	188	harder	238	heap
39	scar	89	York	139	recur	189	darker	239	hip
40	gar	90	pork	140	repairs	190	marker	240	hiking
41	more	91	fork	141	repaired	191	Parker	241	low
42	four	92	woodworm	142	reverses	192	former	242	law
43	pour	93	suburb	143	reserve	193	warmer	243	seat
44	door	94	adverb	144	rebirth	194	absorber	244	sit
45	store	95	members	145	returf	195	order	245	is
46	shore	96	modern	146	return	196	corner	246	with

47	core	97	effort	147	referred	197	mortar	247	has
48	whore	98	homework	148	reverse	198	corker	248	was
49	score	99	network	149	rework	199	forker	249	likeable
50	never	100	monarch	150	re-arm	200	porker	250	amazingly

Social Networks and Language Use Interview

Please list the people you have the most regular interactions with on a weekly basis. Think about:

- Your family/partner;
- Your flatmates/housemates/neighbours;
- Your work colleagues;
- People you socialise with in your free time/friends;
- People you regularly meet in other environments (shops, church, clubs);
- People you regularly talk to on the phone or video/voice call using Zoom/Skype/Messenger/What’sApp.

Name (initials/nickname is enough) gender age nationality	Contexts in which you interact (list all, e.g. work, church, home)	How much time you spend together (in person or on the phone; estimate hours per week)	Language(s) in which you communicate	How long you have known each other (years)	Friends or family you share	(at the end) How close you are (e.g. would you trust this person with a secret)?

Appendix II: Free Speech Data

Transcriptions of Free Speech Recordings

Key:

I – Interviewer

P – Participant

**◊ overlapping speech/interruptions

() unintelligible

[] nonverbal communication

- false start/incomplete word/repetition/trails off-

... pauses

“” a quotation

um filled pauses

: syllable/sound lengthening

P01PA

<00.00.300>

P: mhm... worst and the best... [clears throat] it's hard to say... I would say... um... 'cause many people was... asking me from Poland... *how do I feel* <mhm> here... and if I don't have any problems or... troubles... I-I'm if I am bothers pf- by someone <mhm> um because I am Polish here... <mhm> and I would say I don't have p- any... problems... in my daily life... like... some of the... Polish people in our country can... um heard about some incidents... with Polish... people... um [sharp breath intake] incidents but um... a-as-a Polish um as a Polish people um- were victims in the incident... <mhm> I don't have any... problem with that...

<00.54.950>

I: what- what kind of incidents...

<00.54.995>

P: um I heard um... there was you know when there was Brexit there was... um... in one school... um ... the chil- um chil-child was I think um... just offended or just um... beaten...

<01.09.514>

I: alright

<01.10.157>

P: or there was one in some ... um... small city... when they um... some-someone kidnapped someone on the street because he was Polish... <mhm> just I heard about this... two things... two incidents um... in UK but um generally I think w- you know um f-from my point of view I don't have any problems and the migra-m- i-if Polish migrant um... ask me..I don't... I have quiet and comfortable life... <mhm> um... the best... thing... being Polish migrant is that they... appreciate your hard work... and they... appreciate if you speak English and... you have um... good idea so they... appreciate your... effort... at work... and your ideas... [breathes in] um...

[long pause]

mhm

[long pause]

the bad thing about Polish immigra-migrants um... [breathes in] the f- the... the one of the bad things is that you might be putted (unintelligible) the um...in... you might be... judged by... bad th-things or bad um situation... created by Polish migrants... so ... <mhm> um... where... there are some...there was probably long time ago not now... but ten years or more....Polish immigrants here:... like in Germany they a- have opinion that they um... they stealing some things... or: they um... drinking and making (unintelligible) or um... arguments... in pubs or not only.... so... sometimes m- they might be s- someone could suspicious that you might do something like that... but this is very rare in my... personally I didn't... I-I didn't experience such a... <mhm> um... sticking the labels to me like that... but I know that's... it might be-... might ha- mi-might happen... um...

[long pause]

mhm-it's... I think I-I don't... see other... points...

<03.42.998>

I: so- so the worst thing is you can be labelled as being sort of dishonest or...

<03.51.960>

P: ...or just be... hooligans... <mhm> just be... com-... con-conflict um...you might be really easy to get in conflict or just um... the fight... but... I'm not saying that this is the general... this is the old picture which was probably ten.... more than ten years... <yeah> and after this two-thousand f-... after when we came to E.U... um joined E.U. and um... more Polish people came here I think the opinion is mo- much better about us... so... this is the bad thing...

<04.33.834>

I: mhm... maybe on a more personal *level* <the best>

<04.35.554>

P: the-the... hm <well, sorry> best ... if I think if there is a- another good thing of being Polish immigrant... [coughs] like I said um... the-the mhm the good thing about us I think- as a Polish nation we... um... quite open... to cooperate and kr-um... work in the team... so I think... this is good thing... about us... <mhm> as a... Polish immigrants.

<05.11.684>

I: more open than <than> (unintelligible)

<05.13.961>

P: than:... other nations...

<05.17.020>

I: you mean than British people or other migrants <um> or...

<05.19.361>

P: um... comparing to... yes some British... <mhm> and some...um... just generally... <ok>
comparing to all the nations.

<05.35.465>

I: what's the worst thing about being a migrant... you know... I don't like this part of my life
here in the UK... um...

<05.43.280>

P: no I think there is no other part ... because I am immigran-migrants yeah I'm... I... I don't
think so that... because of that I had any other worse... side of i-... the- the- I- I was putting
in the b-bad situation no... I think no... *there is no* <mhm>...

[long pause]

until you want to sort it out somethin-something and... um until you respect others and you...
um... initiate something... I think there is mhm doesn't matter if you are Polish or British
or... mhm or Indian or... [breathes in] um Spanish immi-migrants... no I... I-I don't have
any other... but...

<06.32.236>

I: OK, so you think... basically you- <yeah> you enjoy living here... <yeah> your overall
sort of experience <yeah> is a lot more...

<06.39.238>

P: yeah is mhm positive yeah... is more positive than-than negative <than negative> mhm...

P02PD

<00.00.300>

P: mhm... worst and the best... [clears throat] it's hard to say... I would say... um... 'cause many people was... asking me from Poland... *how do I feel* <mhm> here... and if I don't have any problems or... troubles... I-I'm if I am bothers pf- by someone <mhm> um because I am Polish here... <mhm> and I would say I don't have p- any... problems... in my daily life... like... some of the... Polish people in our country can... um heard about some incidents... with Polish... people... um [sharp breath intake] incidents but um... a-as-a Polish um as a Polish people um- were victims in the incident... <mhm> I don't have any... problem with that...

<00.54.950>

I: what- what kind of incidents...

<00.54.995>

P: um I heard um... there was you know when there was Brexit there was... um... in one school... um ... the chil- um chil-child was I think um... just offended or just um... beaten...

<01.09.514>

I: alright

<01.10.157>

P: or there was one in some ... um... small city... when they um... some-someone kidnapped someone on the street because he was Polish... <mhm> just I heard about this... two things... two incidents um... in UK but um generally I think w- you know um f-from my point of view I don't have any problems and the migra-m- i-if Polish migrant um... ask me..I don't... I have quiet and comfortable life... <mhm> um... the best... thing... being Polish migrant is that they... appreciate your hard work... and they... appreciate if you speak English and... you have um... good idea so they... appreciate your... effort... at work... and your ideas... [breathes in] um...

[long pause]

mhm

[long pause]

the bad thing about Polish immigra-migrants um... [breathes in] the f- the... the one of the bad things is that you might be putted (unintelligible) the um...in... you might be... judged by... bad th-things or bad um situation... created by Polish migrants... so ... <mhm> um... where... there are some...there was probably long time ago not now... but ten years or more....Polish immigrants here:... like in Germany they a- have opinion that they um... they stealing some things... or: they um... drinking and making (unintelligible) or um... arguments... in pubs or not only.... so... sometimes m- they might be s- someone could suspicious that you might do something like that... but this is very rare in my... personally I didn't... I-I didn't experience such a... <mhm> um... sticking the labels to me like that... but I know that's... it might be-... might ha- mi-might happen... um...

[long pause]

mhm-it's... I think I-I don't... see other... points...

<03.42.998>

I: so- so the worst thing is you can be labelled as being sort of dishonest or...

<03.51.960>

P: ...or just be... hooligans... <mhm> just be... com-... con-conflict um...you might be really easy to get in conflict or just um... the fight... but... I'm not saying that this is the general... this is the old picture which was probably ten.... more than ten years... <yeah> and after this two-thousand f-... after when we came to E.U... um joined E.U. and um... more Polish people came here I think the opinion is mo- much better about us... so... this is the bad thing...

<04.33.834>

I: mhm... maybe on a more personal *level* <the best>

<04.35.554>

P: the-the... hm <well, sorry> best ... if I think if there is a- another good thing of being Polish immigrant... [coughs] like I said um... the-the mhm the good thing about us I think- as a Polish nation we... um... quite open... to cooperate and kr-um... work in the team... so I think... this is good thing... about us... <mhm> as a... Polish immigrants.

<05.11.684>

I: more open than <than> (unintelligible)

<05.13.961>

P: than:... other nations...

<05.17.020>

I: you mean than British people or other migrants <um> or...

<05.19.361>

P: um... comparing to... yes some British... <mhm> and some...um... just generally... <ok>
comparing to all the nations.

<05.35.465>

I: what's the worst thing about being a migrant... you know... I don't like this part of my life
here in the UK... um...

<05.43.280>

P: no I think there is no other part ... because I am immigran-migrants yeah I'm... I... I don't
think so that... because of that I had any other worse... side of i-... the- the- I- I was putting
in the b-bad situation no... I think no... *there is no* <mhm>...

[long pause]

until you want to sort it out somethin-something and... um until you respect others and you...
um... initiate something... I think there is mhm doesn't matter if you are Polish or British
or... mhm or Indian or... [breathes in] um Spanish immi-migrants... no I... I-I don't have
any other... but...

<06.32.236>

I: OK, so you think... basically you- <yeah> you enjoy living here... <yeah> your overall
sort of experience <yeah> is a lot more...

<06.39.238>

P: yeah is mhm positive yeah... is more positive than-than negative <than negative> mhm...

<00.00.031>

P: um so um... for me the worst... was the beginning... when I came here... I thought that I'm gonna (unintelligible) with English people that it's gonna be so wonderful I'm gonna learn English and English accent and everything but -n... [click]

for the first year... for-for y- years of be- being here... I was working with mostly... English peo-... um with mostly Polish people and... people which don't speak English very well ... so this was the most... and biggest disappointment... for me...

um... it's the same in the university... I came here and I thought I'm gonna go to university it's gonna be wonderful I'm gonna meet many nice people and... yeah ... it was completely opposite...x

<00.36.988>

I: <um> what do you mean the opposite...

<00.38.371>

P: um I went to university um... I met... Polish people... again ... didn't speak English much... with them obviously... um other... English people they only... kept close like within this- themselves ... so they didn't open to anybody else ... like most of the English people they just being friends between themselves and no Polish people no immigrants no nothing... so it was like kind of excluded... us from their group... <yeah> and they mostly already knew each other from back from the school ... so yeah this was the biggest disappointment when I came here... um... yeah the English...

and: the best thing of being um... Polish... immigrant in the U.K um... I don't know... people when they-... when I'm saying that I'm from Poland they try to speak Polish they try to be nice to you... yeah... it's kind of a... mhm... it's kind of cheesy I would say and I don't really like anyone- yeah...they just try to be nice... and a lot of people saying that... Polish people are really good workers like hard workers ... so this is another good thing ... they like Polish food as well... so they always saying ... oh I ate this I ate that it was so wonderful and I was like ok great... [laughs] *good for* <hm> you... [laughs]

so yeah basically this is it... (unintelligible)... mhm... I don-... have any big positive um... memories of me being an immigrant in-in Poland... [breathes in] I... came across a lot of stereotypes... um... people thinking about me that I'm:... just came here to do work and just... going back... <you came to> just to d- work... <yeah> and just... earn money and just go back to Poland... <mhm> and:...

I was k-... I am quite ambitious so I just wanna go up and up... as much as I can... and I could see that it blocked me many times... that people judge me... because of then... um... they judge me as well because of the way I look ... because I look very young... so... they thought that I'm immature... <yeah> and um... it was kind of disappointing as well... but um... yeah but being an immigrant as well here... from my perspective was a... big world... opportunities I would never have back in Poland... um...

so yeah... there was-... yeah there's people-... there's lots of people which are open... which: are:... gonna... help you... whenever you need help ... obviously there is some obstacles but if you don't try hard enough in here... you will go somewhere... whereas ... when you gonna try enough... hard... enough in Poland you-you still would... be stuck in the same... *position*... <mhm> in my opinion... because i-if you don't have contact in there then... yeah then you are just like... done... I-y-you can't really move...you really or you have to be super talented or... you have to be ...

[long pause]

[breathes in] yeah...here yeah it-... yeah I'd... had lost of opportunities lots... I can't complain about it... where I am right now I would never be back in Poland... I'm quite happy with... what I achieved ... <mhm> um ... yeah... so that's it...

<03.39.357>

I: What about the price, is there a price you had to pay

<03.43.249>

P: in the beginning I was really upset ab- missing my family but then... no I'm quite... happy...

<03.48.903>

I: but then your family came here [laughs]

<03.48.903>

P: yeah.. no really... no... XXX was here already so I had XXX and I had my family right now in here... <yeah> so um... no I don't think so there is a... price I had to- there is a price that I had to pay but it was my own mistake my own decisions... which I made... here... <mhm> but... there (unintelligible) um... no... I wouldn't say that I had to pay a price...I'm not very... patriotic... I don't... miss Poland a lot... I go there... two times a ...

[external noise, door being closed]

<04.24.800>

I: sorry... mhm

<04.26.649>

P: *I go*<(unintelligible)> there two times a year... it's enough for- more than enough for me... so um...

<04.31.295>

I: twice a year

<04.32.05>

P: yeah... twice a year... it's-it's-it's mo- more than enough... I don-... I don't (unintelligible)... in the beginning I was missing a lot... my nieces my sister... but... than I realised that... [sighs] every time I went there... I ended up... being upset... so...

<04.47.367>

I: upset about what...

<04.48.850>

P: about... you know how f-... how- you know the saying... that you look good with your family on the picture... yeah... <yes> yeah so... basically... you are far away you missing them you think like... you're trying to idealise them and: thinking everything is just fine at home... but when you going home and you see yeah... it's not really that... colourful... as you it is... an um... yeah ... and then you just... going to the point when... you just don't wanna go that much... there ... and you just see your life th-... quite happy in here...

[long pause]

so yeah... I don't so there is a price...

<05.20.519>

I: any plan for... you want to stay here

<05.23.020>

P: yeah I'm staying here definitely... or I just want to move somewhere... else... Canada... U-no-not U.S.... but Canada maybe Australia ... I want to try *something*... <so you don't want to stay> *I wanna* <in the UK> stay here f- like I wanna stay here... but I was thinking that I could go somewhere for few years... <ah> just to try live somewhere else just to see... it's just my own curiosity and... just trying to... you know explore... um yeah just... s- l- leave my house in here... rent it... and then just go and live somewhere else for a... *year* <what does>

<05.54.113>

I: what does your partner think about it

<05.54.381>

P: he will just follow me... [both laughs] no... he is- he wants to stay here but for now our focus is just... mortgage an-and the house and... and then we'll see if I will get a better job somewhere why not...

<06.05.592>

I: sure

<06.06.085>

P: why not take a chance isn't it... (unintelligible) life is the only one you have...

P03GM

<00.00.020>

I: right...

<00.01.413>

P: the best thing of being migrant... well from my point of view... the best is my education... I had education for free... and to be honest... as much as I really wanted... so I had two faculties... and for that... I feel that I am far better than most of English... um... guys I work with... cause they... p- a lot of them they have either... High School... *or a* <mhm>... college... or maybe: a... Bachelor's... only done...*and* <mhm> usually um... they end up with massive debt... *which-* <mhm> which I think I'm quite lucky I don't have any... my education was free so... I started with a clear account... so that was amazing and I really um... I re- appreciate that... [tsk] so... I'm sure this was very good...

what's- what's the best... I'm not sure if it's the best for me or for the employer... <mhm> but: I think we: have: quite um... quite a: high work values... we: we like to work we are quite effective... um... and we are... rather hardworking I would say... <mhm> it's- it's... rather something we:... we have...in blood... *we* <mhm> don't like to stop... which is bad for us...but it's a different story... [breathes in] that um... yes so I think that two... two quite... um... interesting things... <mhm> that we have...

What's the worst... mmm suppose is the:... the distance... <mhm> you have quite far away... ummm <the distance from what> um-distance to home... right to a homeland... <ok> so obviously two and a half... hours... um flight... <mhm> this is not um... this is not a:... easy to get... you know to pop in for a weekend... obviously you are- you are too far to (unintelligible)... you can't just pop in to the car like in Germany... and- [sighs] and have a... trip... <yeah> to home... so... whatever you do you need to plan it ahead... with a limited amount of holidays... so homesickness and um... and stuff around migration is- is not something um... that is a fun...

<02.11.973>

I: so- that is- you mean- so it's difficult to maintain contacts with-with...

<02.17.602>

P: with anyone...with a family... with friends... <mhm> with... with- just with your- with you even a k- um... you know just country... *like* <yeah> to be honest I've even lost interest in the politics I'm not really... um... bound to it anymore... cause y-y- I don't have time to follow it day to day... so... I'm not sure if it's the worst but this is something that you feel like you-you are bit um... you know after few years y-you feel you're cut off from that... so even when you come back home... people are chatting about events and- and- and... some- some things you:... you didn't really experience... you didn't hear about... you are not very interested anymore... <mhm> so you do feel that you are a stranger a bit...so this is- this is obviously one thing...

the other what's the- the worst to be here... I suppose language... diff- little bit different culture you don't feel like you are at home... you feel like you are... an alien... <mhm> but it's no-n-not because you Polish... because you are a migrant ... doesn't matter where from... you are not in your own... in your own land ... you have no rights... no- no- you know... you don't feel like you have any rights to:... claim it yours... to feel like you are... in your own place any- anyone can at some point tell you... pack your bags and... get out...

<03.34.482>

I: do you think this is- have people done that

<03.36.858>

P: sorry

<03.37.360>

I: have people done that to you

<03.40.260>

P: done that to me *no* <yeah> they didn't but: you feel it... [sighs] you will never feel like this is yours... um... that you j- you know you have... ancestries... um... some- some history that your- you know... your family lived here or did that... y-you don't have a part in it ... if you know what I mean...

<03.59.562>

I: OK so it's not something that someone has said to you

<04.02.237>

P: *no no no no no* <but it's> but it- th- w- what's worst for- for (unintelligible) migrant <yes> from your- um... from your perspective you said so... that- this is my feeling that I don't feel like I... I have any roots here ... funny but actually it would be nice to have some... some memories of people living somewhere here... doing something... but there is none there's like... carte blanche... there's nothing...

[long pause]

so I miss that... mhm obviously different language so you- you will be able... to say hundred percent all... you think... or y- what you want to say... sometimes... you have to... you know make some way around it... it's not as natural ... as when you speak your first language...

[long pause]

I don't know what else you expect

<04.45.753>

I: no no no... really... I mean- it's your personal experience... ok so you said the feeling of not belonging... if I can say that... *you said that* <mhm>

<04.52.832>

P: of being a stranger...

<04.53.876>

I: speaking a second language... *um*... <yes>

<04.56.501>

P: *so you will* <s:-> never... say all you want...

<04.58.953>

I: yeah... you've mentioned- I mean you said having education but that's kind of the best part of being from Poland [laughs]

<05.03.811>

P: y-yeah but th-that's what you wanted no... from being Polish... <yeah right> *so* (unintelligible) that comes with you... free education... <yeah> no debts with you...

<05.10.328>

I: so what's the best part of living here in England... do- I mean- w-what...

<05.14.777>

P: *what's the* <you know> best *part*<yeah um>... I love English roads... I like to drive here... it's much easier for me as I'm left handed... so for me:... I love the roads... I really enjoy driving here... love that there is a lot of roundabouts actually... hardly any crossings with lights... which makes sense... that- that makes driving... um... much easier... m-much pleasant ... you um... you don't struggle at all... cause in Poland you know you have the rules of right hand... whatever... um... funny crossing when no one knows where to go... so... yeah I love that one... um... what else ... [tsk] you know there's a lot of things I like <mhm> here e- except the weather I suppose that's everything... I mean I do like a weather... like um... let's say... wintertime... that is milder... so yeah there are some pluses I like that this is a green island... lot of greens... a lot of ivies which I really really like... um... so there are some plants that are surviving here during the winter... I really like it... if you don't have that... um... winter syndrome... when everything is grey and dull and smell of the smoke... this is something I definitely don't miss... <in Poland> yeah... <yeah> yeah yeah... th- there's a big difference and I'll-... I think it's-it's... the air is better here... I love the fact that I've got only... one hour between one and two to the seaside... that's something totally new and- and- and... um... absolutely fantastic... about living in London... in this area... just jump into the car and get to the coast... <mhm> spend as much as you like... and within a day you can be back... so... yeah... I think it's a... it's-it's really good...

<06.57.731>

I: so on the whole would you say there are more advantages or disadvantages of...

<07.02.730>

P: [tsk] I think for me there's more advantages... cause except the language... I don't really see any other... really... disadvantages... [mispronounces the word]

P04BK

<00.00.020>

P: o:kay my... bad... um situation... *they* <mhm> was when I wo- when I worked (mispronounced as “work-ed”) in the... motor service... on the night shift ... and the one time they came to: one... customer I think they was some lorry driver or something... and they asked me what are you from... and I told him... I'm from Poland... and sh- he starts looks like shouting me ... what a- what are you doing here why I'm steal... um... a job from- for English person... mhm I tell him... I coming to:- I'd-... I working on the- this job... I do this job... but I don't think so you like... that... and um: he stopped talking to me and- ... he very... looks like... not happy... they go... um... b:ut... they some...mhm ... if I can say level people... it's not-... not every people is same... <yeah>

when I worked (mispronounced as “work-ed”) on the cater- cate-catering... I meet with... mhm... a lot different people... some people they was really ... um... really bad... really-... not... mhm... not nice... not helpful...

but: some people... they coming and they... if they see-... if they saw I worked (mispronounced as “work-ed”) alone... by the counter... they try help me ... they: say very nice... positive... compliments or:... nice words... and I think so... if people they work... they – they- they... finish... college or:... high... school they is more... um... they more accebal- a-accebal-... um... acce-... ac- <accepting> accepting people from outside... from:... different country... and um:... they is more nice... to talk or: whatever do... it's people who they... live just live in England... they do... um... they finish... minimum... level ... they don't sometimes they don't understand... other people they don't like... um... people from o- outside... from aboard... *looks* <mhm> like that...

<02.33.979>

I:what's the best thing about being a migrant in the UK... any positive... *experiences*... <mhm>

<02.45.603>

P: when I changed my job... for [banging noise]... security... m:anagement ... they ... u:m... they care about... staff...they ... I think they accept... accept me ... um.. because m- before when wo- worked (mispronounced) in the catered-... managements they want just... I'm do

this job... nothing else... and the security when I... start work... every time they ask me "how are you"... not just ask just... you know... um... <they want to know> want yeah exactly... and um... when I s- work... with... this people... every time... every time... I'm feel like you know safety... or:...

[long pause]

and they job- this job... for me... they give it to me... mhm...

[long pause]

I forgot this word...

[long pause]

comfortable or: looks like that...

<04.08.899>

I: you mean you are comfortable or...

<04.10.758>

P: yeah ... um... if... i-other people they... you know they... if-if other peo- if I see... the other people they: care about ... me my health or my family or something... I feel comfortable... and I feel... better...

<04.31.850>

I: wha- in what way do you think your life is-is better in the UK and maybe in what way is it worse... than- than- than in Poland...

<04.40.282>

P: in Poland every time... I-I will be care about job... if I got some job... if I'm do properly my job... every time I'm not sure if I'm... lost this job or not in England life is... um... is better ... i-if I'm... if I'm do some job ... properly job... I don't must must care about I lose this... the salary this-... if I'm do so- some job... salary is proper for life... I don't need you know ... care about my family or something I- I don't have enough money for:- for- for- for food or something... mhm... the...

[log silence]

<05.36.262>

I: OK what about- is there anything you're missing... like if you *were living* <I love>...

<05.41.030>

P: I miss- I miss just one thing: my family... because it's too far... to visit ev-... for short time or something... when I go to- for my holiday I just... you know... I (unintelligible) per year I can go to-... one time per- um... one time per year I'm go for holiday visit to my family... of course I'm talking about... by the phone or: any- any- um... Whatsapp... but it's not enough ... it's not same like you: meet... together... mhm but...

[long pause]

(unintelligible)... prefer live... in England <mhm>

P05ZH

<00.00.175>

P: okay... so... I think the best experience is like... um what do I think about Polish... <mhm> like a lot of things like we are very hard working... we:... do our job great... and (unintelligible)... our like... religion or our like traditions is not harm... ful to anyone... <mhm> like... few weeks ago I've got a job... um like very well paid because I'm-... Polish and they was like... the- my manager said... oh I know you work Polish... you are like hard working you... you do everything like um... good... we don't need to explain you how to use the broom (mispronounced)... or simple stuff ... [breath] um... so yeah... the fame... behind the Polish people and also like... there is like... a lot of of us... so sometimes it save me some situations like... um... I was flying... um... from London to Paris... and my suitcase was like two kilos... too heavy... and a gentleman man and the... you know w- would like... um... checking that he said... okay and he was Polish and he recognised me for my Polish I.D.... because he was... yeah (unintelligible) it... and he said to me in Polish okay don't worry like... i-it will pass yeah... <mhm> so: you know that our like... social small cycle... or... yeah... I think this is like... one of the best parts and also like... admiration of people... like "oh wow you have learned another language"...

um... I think the worst part is... what no- I didn't have that many... but... um... I think was the m-... um... affecting me the most is like the student finance thing... *as:* <mhm> the imi- because student finance um that changed since I moved in... so now to get... um... there's no problem for me to get maintenance um now... to get the tuition fee loan there's no problem at all... but for the maintenance loan I need to meet so many... criterias and:... even when I spoke with... one RUSU financial advisor she told me... um being on the... migrant worker tuition [careful pronunciation of the type of fee] fee it's the most (unintelligible) one because... I have to work um over twenty hours I have to send them all payslips it's like a lot of paperwork... and:... I need to always make sure I will make enough... ho- hours... to get that maintenance loan... and also it's not like... the full amount ... it's only to cover seventy percent of my rent... so:... this is like the thing which um... ...as like the immigrant I don't find it... right... but I'm not angry about that... because I'm in somebody's country so... this is the rules... <mhm> or: like... I don't find... a lot of like... downsides of immigrant here I see more... upsides than... downsides so... <mhm>

<02.58.841>

I: oh <oh yeah> *if you were living* <so> - imagine if you were living in Poland and... you know...

<03.03.196>

P: the thing like for example if I would stay in Poland I would st-... live at my Mum's place... and I would g-get like some... financial government aid so I wouldn't... worry about part-time job and: about living and paying the rent... that would be the thing but I would never than... learn English I wouldn't meet like new people... um... what I love in England you know the money-wise and also like... um... he- like... I start travelling around Europe I was in so many places so because ... we're so... close to London and London is like the main: um... airport place so this is great... um...

there is some like... a harming um... cliché about Polish people... like you know alcoholics thieves... what else... but: I can see: people might laugh about that this is like more as a anecdote but... I don't think I was like... a lot of time harmed by this yeah...

and: ... mhm... oh what I don't like... when I used to work in a pub and when I had... Polish customers but they were like... kind of like... cheap... people like... when *th-* <what>

<04.15.117>

I: sorry what people

<04.15.984>

P: cheap

<4:16.789>

I: cheap

<4:17.311>

P: yes <mhm> like... oh... whenever they knew like I'm Polish or something because one of the- my colleagues um... um... they were like... "oh you Polish yeah you are... ours nation's sister... give us beer for free" or something and it's like... no because we bo- both are Polish... no...

P06MP

<00.00.255>

P: well... best experience... well I met my wife here... [laughs] <OK> definitely... you know that's the... goodest experience here... and um... obviously I am... learn a lot of... um... different... culture and different um ... attitude from the people... from other- countries not... particular... English... just other... nations ... <mhm> um that's good um... yeah um... my eyes been open a bit... for the... more like um... I got experience from the other... people... <mhm> is just like... you know... um... I like... meet new people: if they are worth to knowing if you know I mean...

<00.53.090>

I: can you explain <it's just> *a bit more*...

<00.55.078>

P: is just... is just like... you know... is just like people from: you know... let's say... with... um... people from my... place when I working... <mhm> um... some of them are obviously... assholes... and I not even try to:... ask them how the... basically weather is um... or (unintelligible) small talks and stuff like that... but other people you just you know... is just getting know each other more and more and it's like... um... they- they just you know invite you to their house... feed you and stuff like that and um ... you know each other more and stuff like that so... um... that's good experience... <mhm> I don't think... you would be able to... you know- know that experience... back home... <mhm> so... that's be- that's definitely good thing... and um... what else I mean... the way of life here... is... good for me I mean is like you know I-I'm not worried about... financial things if I can afford... everything apparently... what I need... for my... yeah... um... [smacks lips] I don't think it's possible there... back home... still... with my... even you know... knowledge of um... of- of- of- of Polish market now what's going on there they still... is lot of work... um but the um you know contracts are not I mean you-you've got no contract there um... so... I know... I know for sure my... majority of my friends are... um...in army...

<02.47.088>

I: in the army...

<02.47.699>

P: yeah... army mens... ehm... obviously government paying you and everything so that's- that is good thing... [inhales sharply] um... but yeah ...they- they haven't got I mean there's no... like um... if you wanna worked for someone... he will not give you straight away contract full pay... without the ZUS paid and *anything* <yeah> that's- that's- that's... out of... the reach: kind of... still here... straight away you coming here you've v-fully pay... obviously... you've got insurance and everything... and you um... you allowed to even take a benefits if you can... if you allowed to obviously... [laughing] um yeah... so... that's... easier life here definitely... <mhm>

um... bad thing obviously... um... the way you- you know you not you- you not with your... family in that much obviously... Skype is very helpful... but um that's- that's thing is like... you know... um... you still are... you know... um... [tsk] foreign person... <yeah> and you can feel that... even if obviously... that's um... not everyone give you that... feeling... to- to- to feel like that but um ... sometimes you-you get that... kind of... vibe...

<04.13.379>

I: from...

<04.13.903>

P: f:- um... from- from person in the queue in... Sainsbury's... [sharp intake] when basically you talking with your wife obviously in Polish because you both Polish so... um...

<04.26.105>

I: have you had any... it's just th-

<04.28.594>

P: *no it's just-* <is it something-> is just you just you just see that someone is just... looking like... it's jut like OK you not talking English... not very often obviously like I said... um... um... I'm just you know... ignoring that kind of things anyway... like I said I'm looking Polish anyway and people know that because I'm... like I said before I'm just... yeah... um... yeah that's bad thing as well... for me... *but* <really> um just... n-not... because obviously that's the-... the most... multi-cultura- um (mispronounced)... culture (mispronounced) I think in the... Europe kind of.. because obviously they had... seventy five percent of the

Earth... under... British Empire... *flag* <mhm> and stuff... um so that is strange for me if: someone's just like you know because like I said in... I heard in Reading just like more than hundred... different nationalities if you know what I mean... <yeah> it's just like Bangladeshi whatever... so you shouldn't be a problem... i-is not a problem I'm not saying that someone's just you know... is against that... but you can sometimes you can feel that... kind of vibe... um not very often like I said in- and um... like I said you used-... whatever you will do whatever you will... you know... know dress or speak or whatever you still foreign... kind of... person... um ... yeah...

P07ZA

<00.00.108>

P: ok... so the best thing about migration... um the best thing about migration is:... new experiences... meeting new people... um learning about new culture... becoming part of this culture... being able to communicate in a different language... um... it's a kind of a journey... so getting a really nice job... and being appreciated in the job... that's another part of migration... that's really brilliant...

being able to.... um... to arrange your life- maybe not arrange your life... um organise your life independently... um with really... no help at all from your family... *so that is* <mhm> something that I- I think I'm really proud of... um so that's the best thing I-I think about migration...

the minuses is obviously leaving your family behind... when: sometimes you just want to just: pop in fo- for a cup of coffee and just to have a chat ... it's good that we have Skype... that's really good... it still minimises the:... what is it the sickness right... no... *homesickness* <homesickness> homesickness... but from time to time it would be better to:... pff just see someone face to face and talk... um... um...

the positive thing about that is actually the flight is not that long... so if I want to... go back home there is still time to do it... make two-hour flight... is not a big problem... <mhm> um... then- the down:side of the situation is that... at some point you realise that... your life is in a different place it- it won't be the life... you are not able in a way to pick up... where you left off... even when you go back... after many many years... <yeah> because it will be... different people... different country... different arrangements altogether so it's ki- kind of getting used to the... [sighs] new set-up... if I can put it that way... *so that's* <mhm> the downside...

some people might think it's not the downside really because it's getting used to something that is new... <yeah> might be exciting... again... <yeah> that's... different views... um... anything else I can... anything else that you want me to add to that?...

<02.07.724>

I: well ok well you've mentioned sort of things in general... how about some-some more specific experiences or... I don't know... something really bad that happened or something really good that happened...

<02.17.575 >

P: OK so: really good things that happened was um... well getting the job I got at the moment and working with... wan- working with people ... [laughs] so meeting really- I mean really good supportive... people in the workplace and being able to develop... professionally... and having the flexibility of choosing basically what I want to do... <mhm> and in what way I want to do it... so in a way... the professional side absolutely brilliant... and also from this group of people emerge a few... you know a few friends... <yeah> which is... excellent... so that's- that's really... that's really good... um... so more specific things...

<03.01.103>

I: yeah yeah that's good... that's good

<03.03.123>

P: being able to: um develop international knowledge so rather than being enclosed in... kind of a one place and one family and one country... being able to see that there are different people... you know that differences within people... *and within* <yeah> people behaviour... and I think becoming more tel- tolerant... you know of all different *behaviour* <yeah> that is something that I think I very much appreciate... um...

[long pause]

[tsk] and the bad experiences...[remembering and smiling] well one such experience that will be very funny... but: um initially... when I arrived here with... my... husband:... um well... husband now... XXX... when:- when we t- you know initially you arrive to the country you: ask other... Englishmen "ok what do you think about my English... how would you *rate it*" <yeah>and so on (unintelligible)... like you know thrilled to hear *other people's opinion yeah*... <yeah... oh really she's great yeah> yeah yeah yeah you just want to hear that... and they tend to say something like... [makes annoying sounds] looking at my husband saying "wow your English is great"... and then looking at me saying... "well yours is good but you know your English is great"... [both laughing] it-it felt like a slap in my face... so I-I got slapped a few times like that and then... then what I think came out of that... was every time

when I met... Englishmen and when Jacek was around... I just started saying... "you know what... his English is great... my English isn't that good but my grammar is better than his so... in other words his pronunciation is better... and my grammar is better... than his... so... let's get over the initial shock... [laughs]... can we have just normal conversation"... I didn't add the second part... [laughs, continues laughing] which is going on in my head... [laughs] so I think that was-... that was the worst experience... so in terms of... linguistic things... in terms of professi- I mean professional... no professionally I don't think I've got any bad experiences really... apart from... ah no no no apart from:... being here in... twenty:... two thousand and five I think... when we were working in a hotel... and I was scrubbing the floors and cleaning toilets... and I remember being on my knees scrubbing the floor saying to myself... [putting on a funny voice] "I'm going to finish my studies and I'm going to be a teacher ... I'm not going to clean toilets anymore"... [laughs] that was the bad experience... any other bad experiences... not really...

P08KA

<00.00.073>

P: so: I think the best thing um... about ... um living in England... as a Polish... person... is... being able to understand other cultures as well... and um maybe... being able... to make more... international friends... than... n-native English... <mhm> I would say yes definitely... because we kind of understand each other we immigrants... [laughs] um... what else um...

<00.36.368>

I: you mean we understand other migrants...

<00.38.365>

P: yes... <mhm> yes m-... probably... um... we have more opportunity to: learn... how to be... flexible... an- um... with: ideas and...

<01.01.269>

I: why...

<01.02.511>

P: um... because we are not um... mhm... we are not being told by our families for example:... our neighbours how to behave... we can just explore... new... areas and... <mhm> yeah... mhm...

<01.26.945>

I: any specific examples for you or you don't want to...

<01.30.590>

P: well I don't have to go to the church for example... if I don't want to... and... well ... um... I'm not told by my... grandparents especially... about ... God and... and: yeah all the... Catholic... traditions and... so... <mhm> it's more freedom... I would say...

<02.03.634>

I: what about... negative experiences...

<02.06.245>

P: negative... um... lack of respect... and that's um...one of the reasons why... I really wanted to improve my English... just to have... just to give: um my... English colleagues... colleagues [self-corrects from KIT to FLEECE] better understanding of:.. what I want to say who am I because I think yes the language barrier is really... one of the factors that creates some... problems between... different cultures... so ... um... yes [a series of false starts] lack of respect I think in... everyday-...

<02.46.703>

I: w-what do you mean by “lack of respect” and what do you think it’s caused by...

<02.51.594>

P: not being treated- as equal... for example if you rent um... the room or... flat it may happen that um... agency would... not treat you as well as your... English... neighbour... for example by not um... giving you a notice when they are... going to...

<03.18.314>

I: are you serious... has it happened to you...

<03.19.847>

P: oh yes... yes... I think... that's one of the...

<03.23.932>

I: so what happened...

<03.25.172>

P: so... [creak] basically um... like- sometimes... they send... um contactors... without giving any notice... and I think it happens... more... to... immigrants than to... native... English... <mhm> tenants... because they... would probably know how to:... react to such behaviour... while... we... tend to be... more... shy about it or: don't know how to deal with it... and yeah we just... let it be... sometimes and I think that's why... it happens... more often... among us... <yeah> yeah... and um... um...

[long pause]

<04.20.371>

I: and what is this lack- lack of respect caused by... you said it's bec- is it because of our language skills or...

<04.25.885>

P: [tsk] I: think so it's lack of understanding... um... yes caused by... language barrier I think and um... I think people don't have really much time in everyday life to spend it on y- trying to understand you and I quite understand both sides really... <mhm> so: it's not only... like oh ... [in a funny voice] "bad English people"... it's not that it's just they are tired at work and if they have to deal... on everyday... basis with:... foreign people not knowing how to express themselves... obviously you can get tired of it as well... and um... y-yes and um...

[long pause]

and obviously if you can't express yourself... and if someone doesn't have eh... kind of... native... English speaker ... doesn't n- any have experience with foreign people... then... um... it: may happen that ... this person will treat you as some... kind of retarded person little bit... although... e-even if you are well educated but not in England then... by not being able to: express yourself in... um... English you may be... seen as... someone... who is slightly ... well is-... uneducated... let's say... because your:... um vocabulary is... poorer than... some of the English... children or... yeah...

<06.04.633>

I: OK any other good or bad experiences related to... migra- your-your experience of *migration*... <mhm>

<06.15.184>

P: um... um... well as an example- but I'm sure if it's very... important but for example... when I... was studying... um... one of my... um English landlords was quite surprised that I knew... the word "taxidermy"... she just m-... many- made a comment... like saying "oh you don't speak very well English but you know what taxidermy means it's-... it's quite amazing" and I just thought... "wow"... [laughs]... probably I may have:... problems with um:... expressing myself but not necessarily... probably I would write better... um ... essay

than her... and probably I would understand more... reading books... in English than her...
but then... yeah... the-... the way she:... can actually.... I- I don't know...[laughs nervously]

<07.18.886>

I: mhm... and who was this lady...

<07.20.617>

P: um... my landlord...

<07.22.516>

I: your:...

<07.24.360>

P: landlady

<07.25.360>

I: ah... landlady... alright... <mhm> yeah ok... <mhm> was she educated...

<07.29.734>

P: not- no... no... *she:* <no> wo-... I think... at the time...um... she was working in factory
or...

09BM1

<00.00.353>

P: um might be the best- um best experience um first... um something positive... um... that I was always a curious kid... <mhm> um... since I'm here... I had... um... this occasion to:... to met... to meet new people... different nationalities... <mhm> colour of skin... I could actually... um... I was able actually to... gain to some... real relationship... with *other nati- * <mhm> um other nations... I met fantastic people... who: gave me a hand... <mhm> um... if to think about um... um um u-um working sections... I mean: i- if to think about work... they help me out I met- met some fantastic people who help me out... with um... with my English as well... they offered me some um... um English courses for:- um for free... <mhm> and: they often me:... trainings necessary to:... to be able to do... what I can do actually... right now... it's all worth it... it was always al- wo- worth it... so:... but the best- the best one...

[long pause]

I think the moment... the moment tha:- um at work... that I felt like um... part of family... <mhm> they let me feel... they let me feel... like... one of them... and it was really good experience...

um the worst one... the worst one... the situation... when I was... in a state of mind that... I knew... my English was improvin'... I gave up um... my hobbies... my interests... that I was doing... str-strictly in: Polish... lets say... the Polish way... and after- straight after that... um... that I've-... I gave so much to be... where I was... that time... and I met someone... um... who gave me... (unintelligible)... really bad expression um... about- about... my nationality... tha...

I've been- I've been working so hard for so many years in here... trying to pick up language... that in the beginning I cou-... couldn't even hear this people I couldn't hear this language it was so... [inhales] soft it was so... um... so difficult t- [laughs] so difficult to hear for me... um... I've been... I gave up Pol- watching Polish TV... I started watching only English British... um... um TV shows ... um programmes ... um... movies... um... I was in a- that time I was in... um... relationship with... a- a Portuguese girl... I think ... I had two British girlfriends... *and um...* <yeah> the moment... I don't remember... exactly the situation but I- I- I mean- I don't-... I don't remember exactly... when I was... I- I just... that moment it

was so awkward... it was so... so pointed... that: I could never- never forget... the person um let me feel... like I'm... not very welcome here... so this is I think this is the worst-... this is the worst part...

and I don't wanna even: say the name *but* <sure> but you... [creaky voice] but- but yeah... this person let me ... get me back on the ground let's say... yeah... told me... this never gonna be my home... yes... yeah... he wasn't really... I think intelligent person not open- definitely not open minded... yeah... two- two faces... you know two-faced person... definitely... it was like um... my good mate... let's say...

British ... yes just a guy sorry yeah ... I think I think this is the major one ... you know ...

<05.14.833>

I: was he British... or she...

<05.16.506>

P: um British

<05.17.435>

I: yeah

<05.19.136>

P: I think- I think this is the major one... mhm... you know... that- that was my worst cause I'm not talking- cause I don't take it to myself I don't- I'm not talking about um... silly situations sometimes that... people got some: wrong... um ex- um impression... um expression... whatever that is... um never take- I never take to myself um... opinion of people who... um they think they know you... um by just um looking at you ... <mhm> so... I don't take it to myself so... the worst one is... more like... you know... if someone lets you feel... that you not welcome in this... country... most... <ok> the most yeah...

P10KS

<00.00.058>

P: I think a positive experience is... it's easy to find a job... in the UK.... I think it's... easy general... g- that life is eas- general easy for people... it's much... yeah I don't know friendly for people to do stuff you do everything online and things like that and- Poland (unintelligible) paperwork you need to do to get some stuff... <mhm> I think this is positive experience... um negatives... don't really have as a personal negative experience being here... but I think generally as a Poles we have... been put in a shelf of being a drunkards and... you know... really impolite

<00.40.129>

I: so the stereotypes...

<00.41.104>

P: yeah it's just kind of stereotypes of us but- as of me but personally I never had like a really... negative experience with myself being Poles... sometimes people asking in advance if you Polish or not... which is... puts you in a stereotype... straight away because... they put you in a shelf of a... being Polish... person... but... [sighs] I don't know... I think... generally it's more positive stuff about being here... <mhm> got my house and: got a good job over here so can't complain...

<01.13.777>

I: so you wouldn't go back...

<01.15.881>

P: I can't never say for hundred (unintelligible) if I gonna go back or not it's just a question for everyone's t- heart to answer... [laughs] <yeah> ...I don't think anyone can say now hundred percent (mispronounced) "I'm going back"... but... if I go back probably will be very hard for me... because of the changes... in the way... two countries are running their... businesses...

<01.37.012>

I: which-which changes in particular do you *have in mind* <so>

<01.39.840>

P: [sighs] I think when you goes back to Poland now and you will say...you going to say... kind of government.. places to say you've been in the UK for some time and now you need to... redo paperwork or do any other things they will already put you in a kind of um... really aggressive a... way of dealing with you... because they not going to like us... that we've been... in the UK 'cause they think we are better than them or no or something... which is <mhm> not true at all... and we don't have a really... polite way of dealing with the customers in Poland... that's the biggest problem... it's opposite here you going and you actually... are treated as a customer... nice and polite way at the most of the places...

<02.23.791>

I: so cultural.. *differences* <I think it's a>

<02.25.764>

P: big culture difference in between here and Poland... so...

<02.30.904>

I: is there anything you... m- miss about Poland or maybe wish things were different here...

<02.36.472>

P: what do I miss... not much... maybe just the family as in being with the family together... but apart of that... not much... we visiting Poland quite often so...it's not like you not seeing them...

<02.54.172>

I:how often do you go...

<02.55.118>

P: um... now it's not so often maybe it's a- once a year... only for holiday time... (unintelligible) I think it's enough for me... [laughs, then continues, laughing] to deal with the people in Poland [laughs]

<03.06.883>

I: why is that...

<03.08.316>

P: because as I said they not really polite if you going to do something or buy something you purchase they're not really polite to you so you feel kind of offended sometimes... not many people smile... when they serve you something... (unintelligible) over- over here you go and: people kind of... generally polite... maybe not honestly but... [laughs] <yeah> it's just natural things for them to be a polite (unintelligible)...

<03.34.248>

I: *so-so it- it* <(unintelligible)> bothers you when you go back when people are...

<03.37.433>

P: I-I did have some issues when Po- when I was in Poland with... making a new ki- documents for my kids... went to the register office and- and um... I try to m:ake their ID... and:... a- a-... a- people there were so unhelpful there were... just not really trying to help you at all... just like you... put you extra steps to do... to get one document... printed... so... I do have not really positive experience.... that's why I don't really miss Poland... I have to go back... I have to... [laughs] it's not much you can do...

<04.13.875>

I: but you're not planning on...

<04.14.980>

P: not planning but everything is now... based on the Brexit... <yeah> so... s-depends what going- it's gonna happen next year... March April or: a maybe bit later on...

<04.26.248>

I: so for the moment you- if you had to choose between the two countries you would- you would definitely choose...

<04.30.842>

P: I probably would choose UK... <choose UK... mhm...> don't know if it's good or not but... [laughs] but <no no no that's... > it's a life... even a simple... um... having a passport for

your kid ... you just filling a form... sending them over... pay for it online... or through the Post Office... they send the documents back and next day you got passport arriving home you don't have to take your kids... to the- o- different... offices and... you know... yo- because in Poland you have to... show your kid... to get a passport done... <yeah> *over* <really> here yeah you ha- you just- you just submitting the form they don't never see the-... the kid live... <mhm> you just have submit the papers and you get a passport back over there it's just- you have to take your kids to the office and wait in the queue for d- hours sometimes or two...to sign all the papers so can take a fingerprints... and things like that... and then you have to wait to three weeks to get a passport... you still have to go and collect it you can't... have it posted to you... so... <mhm> this is a big different in culture and in... the way we dealing with the problem so... things in Poland...

<05.48.282>

I: so a lot more bureaucracy...

<05.49.705>

P: yeah it is... it is...

<05.51.399>

I: and-and why did you choose England and not- I don't know- some other country...

<05.54.786>

P: *I think it was* <(unintelligible)> by accident... because of friends have be here already... <mhm> so it's easy to get a jobs to find stuff or... you know... have a- r- rent a room... if you have someone here he will help you to-... to find a room f- maybe find a job or... help you with opening account and... when you coming here (unintelligible) English is not... good enough to do the stuff by yourself...

P11BM2

<00.00.162>

P: there's a big difference... between Poland and-... and England... I chose England because... my the biggest passion in my life is um... is a g-... are guitars actually um... I really would like to do something in that direction... and... in England that country gives-give me... really big opportunity to do... something in that direction... because people are open for:... every kind of: music you always gonna find a people who's gonna-... who's gonna listen to you and... and be with you you know... in Poland it's totally different... <how-> <how is it different> *it's- it's-* it's hard to play... <mhm> *it's hard* <mhm> to: to:... to play that what you really want to play because the commercial music is on the... on the first place... <mhm> and... even if you-... if you-... if you gonna... play really ambitious music you- you- it's gonna be hard to find people... and promote yourself because... the... [tsk] the music- the- the- the most commercial music is always on front and it's hard to:- to do something out there.... I- I had so many friends who:... who had- whose- who already played in Poland... and everyone... agree with me that... it's no place to- to play in Poland it's really difficult you know if you would like to do something... and- and get even... and have a easy- easy life after that you don't have to pay for every equipment all the time when you want to play on concerts you know... *here* <mhm> it's different it's totally different...

(unintelligible) I- I've got a studio next to my home... it's just five minutes away... it's very very cheap if I would- if I would like to: to- for example do that in Poland... I need to really have a proper job... just to- just to get the... the money for-... for all this things...

<01.45.135>

I: OK

<01.46.224>

P: so... for me the best thing... in England is that one... and... the worst is that... sometimes I have a feeling here... in England... that... we all... we a bit discriminated by-... by-... by others... by English... I can see even in my work like... like we treated like we are... being not on the same level... like with them they still think that we-....

<02.10.063>

I: can you- yeah- or can you give me an example maybe... can you explain a bit what

<02.13.495>

P: *they still * <you mean (unintelligible)> think that we're living in twenty century...
<mhm> you know... like we... we just came back in a- [laughs] in a time... we just...
[quietly] oo...

ah... [remembering] if you don't treat us on the same level that's mean that... it's visible in
my work that... English people and Polish for example are really separated... we do the
hardest work you know we've got different targets... you know it's not official... but... they...
all the time pushing you... to- to do over-... over and over you know and it's so visible that...
the... English you know... have really easy-... easy-... easy life out there...

<02.54.766>

I: so what- what *do you mean* <they treated>

<02.55.587>

P: in differen- in different way... totally in different way...

<02:58.963>

I: you mean different targets... what'd you mean by it...

<03.01.447>

P: [tsk followed by a long pause]

if I want to: to: get for example... um... go for a breaks um... they want to: get a holiday quick
to swap the days you know... it's always "yes"... it's always easy "of course yeah we'll give
you" you know but... when we're trying to do something always problems... always
problems you know... I've got visible-... visible problem like... I'm- I'm doing the-... k-
sometimes doing chemicals um chemicals and other stuff in the... in the breaks and... we've
got the targets... from Monday til- till Tuesday... I'm always (unintelligible) because there is
always the biggest volume you know yeah ... but Wednesday easy days yeah... just English...
whole day... you know... and I'm already called two hours before... ha have you finished
already or not... you know all the time feeling the pression... or like giving you- it's- it's not
the same treating always gonna- never is gonna be the same you know... I met many people

... English people who's really kind you know ... they treat on the same level but: it's- it's hard to... it's not many of them...

<04.05.132>

I: OK... so- so the best thing... is music-...

<04.08.556>

P: music and that's that-... that's the only thing which keep me actually... *actually here* <in this- in this country>... yes... yes...

<04.15.253>x

I: so would you like to <cause-> would you like to- would you like to go um... would you like to um- sort of be... professional... a professional *musician no* <it's...>

<04.24.847>

P: not yet I'm just enjoying- enjoying... playing... on instruments ... *I'm just* <mhm> enjoying creating music... and I'm really patient so... so it doesn't- it doesn't matter how long it's gonna take... someday I'm gonna do that but I'm pretty sure it's gonna be here... cause here I- I gonna have a... chance to... to do something...

<04.45.299>

I: do you think there are more metal fans here than *in Poland...* <yeah>

<04.48.270>

P: I think- I think... it's not going maybe about Metal fans but it's going about opportunity to play... I'm: pretty sure... here is-... is much much easier... even- even the studio where I p- where I actually just practice you know playing for fun if I will... record um:... single- single song yeah... and I will send them... they could promote me and- and give a... free- free session on festivals um... and many other pubs... just to play- just to show up... and for free... <mhm> in Pol- in Poland even if we would like to do something like that yeah... you need to find first the place where- where you would like to... hear you... you know... *like* <yeah> Metal... not this kind of style you know... and mostly it's a commercial yeah... if you don't play commercial... no chance

<05.34.400>

I: so England is better for *alternative* <yes it's- it's... it's m- much better than Poland... >...
OK...

<05.36.719>

P: <OK> and that's my biggest passion so... and that thing keeps me here...

P12NT

<00.00.068>

P: so... being... immigrant in England... um ... the-... the life is completely different like lifestyle and- and the level of life so what you can actually afford... um... um by spending money here... um... if you have the... like... minimum wage... to what you can actually buy and spend... and have for minimum wage in Poland... <mhm> so: we don't have problem to problem to go somewhere on d- holiday for: few weeks abroad... like South America... Morocco and stuff like this I don't think we would be able to do exactly the same thing when- when we were... in Poland... yup...

um... I had some experience: when- when something like... touched me that... I'm... not necessarily... it's not like welcome but it's that there is a difference English citizens and immigrants...there was for example when I was doing... um training ... um for: forklift license and the bloke told me... “you alright you Polish... that- that's good you're white... you not black so... that's even... that's fine... that's plus”... <mhm> so... that's a funny bloke he was from um... somewhere else...

um the other thing which was quite sad to be honest when I was trying to um change job before this so I was the- the- the: um warehouse manager with XXX ... um warehouse manager... I was trying to g- get a job and that was a: few months after Brexit... <yeah> so I've told in- in few occasions at that moment we... don't want to hire anyone f- from abroad... cause we don't know what will happen and we don't want to... train someone and then lose him if the government will um cock up so... <yeah> it was like um... [sounds disappointed] (unintelligible) the- the thing is... it's- we- I can always go back to Poland... <yeah> and I have this option when the people which are born here raised here... they don't have actually this option so it's always something to... you know... positive look for... if... <yeah> it will be needed... so yeah...

<02.05.700>

I: mhm... so... going back- I- I didn't quite understand what you said about this guy... when he was hiring you he said “it's good that you are Polish” or was it *bad*... <no he said>

<02.14.610>

P: he said... he don't mind... Polish... um but the problem was um... actually at the- at this this (unintelligible) point or even today the government didn't set up on anything... he said “we don't know... what will happen”...

<02.28.239>

I: no I mean the previous one... *they said* <ah previous one> “at least you're not black”

<02.30.781>

P: *no he said... “oh* <(unintelligible)> where you from...” “yeah Poland...” “yeah Polish... yeah at least you're not black”

<02.37.009>

I: OK... so: two examples of... kind of... discrimination or whatever you call- <those two> those two examples... *yes* <yeah...> <okay> but mostly your experience is largely positive *yeah* <yes>...

<02.49.246>

P: the people it's like... m-most of the people are more professional... but... saying that I was working with people on the- on the like-... very... um... basic knowledge and:- and- and basic... like lifestyle... so for example... drivers... and so on... and after the what- after the Brexit it was f- few funny situations when they were like... um... trying to argue with me that yeah... Brexit is fine... Brexit is good... I said wait... that's your point and I w- I would like to see who will work for you... anytime soon... cause for example m- um... it's again Brexit... I don't know if it's revelant...

<03.28.598>

I: no you go on... yeah... go for it... yeah...

<03.30.377>

P: um... my administrator so when I was manager I had my m- administrator and she said “everything will be fine now ... so: we gonna get rid of immigrants and then... we all gonna get pay rises... and everything will be much better” I said “yeah... right so I gonna pack myself up go back to- to Poland... who will work for you”... “no no no not you not you... you doing good job... you'd- y- y- you speak English... you don't taking any benefits and- and

anything"... I said "yeah but you see... the basic thing is... if I am immigrant... few year here- few years here... the very first thing is I can't get any benefits I have to earn them first... so... what you have a- a- against immigrants . The English people are- are taking benefits and- and stuff like this... so all the participation of... the whole situation is completely.. you know... um they-they have completely different o-opinion and- and d-different of the reality than actually it is... <mhm> yeah...

<04.23.075>

I: so who was this lady...um... like she was you mana-... no

<04.26.169>

P: no I was her manager... funny thing she's sixty f:- [thinking] yeah fifty seven this year and I was her manager a year ago [laughs]

<04.35.758>

I: that was in your:... *previous job*...<a previous job.. yeah>

<04.38.763>

P: and now you see my manager is- is English... um sorry Polish... um the CEO of the: f- um company is German so it- I'm-... at this moment I'm working in... *international* [noise of paper being moved] environment... so there are like German France um... um... English... Spain... um Portuguese to- all- all h- all ove- over the- the Europe so there is no discrimination there at all <mhm>

<05.03.977>

I: ok um is there anything you miss about Poland...

<05.07.600>

P: yes... um... it-... I- we left all of our friends there... and it's like you know you coming to n-new place... no it's like y-you see y- y-... you leaving everything you leaving your family you leaving your friends you leaving your:- um I'd- you know instruments everything behind you... you coming here and you starting from scratches... and b- what is sad in most of the situation... you not gaining any new: um friends and stuff like this... cause for us it's- we- we don't even know where to start looking for new friends... it's like you know... random-

randomly it's happening for example the people which were living before... they like ... w-
cause it was like... ten of us in the house... so we still ... d- um s-still in contact with: two of-
of- of the people... the rest not really... so: it's like... you know... and um... I was um... part
of the... um guitar Polish- Polish guitar forum ... so I have: you know... people which I know
from the forum now th:- they just you know... step up becoming my friends... <yeah> like in
English vocabulary “friends”

<06.17.211>

I: have you- have you met them in person...

<06.19.045>

P: yeah... here... <ah... ok> I fix them guitars as well

P13NE

<00:00:072>

P: so the best... from... living... abroad... I think... first of all... I've learn how to speak English without... kind of stress and... things like "oh I can't speak English"... <mhm> um travelling is much easier... because you can use English everywhere... [laughs] without doubt... and um... basically if you:... moving to live... somewhere else... it gives you this... like... bigger view... um... and um... other things... *kind of...* <what do you mean a different view>

like um... like... the other things... they kind of getting easier... [clears throat] because you... did something... quite... you know big... unexpected... or something like... challenging... a little bit... like we just came with a backpack and... you know... started over...

um... from good side... um... [clears throat] London is great... I really like it here... I like as a city... like everything... like a food for example or d-different area you can see kind of see... kind of... small part of the world in one city... um it's lots of going on... um... from work perspective... I think depend what you do... is good and bad... whatever you choose... definitely l-... life is easier when you earn in pounds... um... you can do more you can travel more... you can... get more even things... in comparation to Poland where... for the same... kind of job you've got much less money so...

um from positive... I meet different people... different culture so you more open... you kind of... want explore more... and see more... <mhm>

from the negative... you miss- like I do miss my family... and my friends... I have... not made... a close relationship with... um friends in here... that close like I did during my Uni... [clears throat] because that's my closest friends there... not from the... Primary or Secondary school just from the Uni I've the- the close friends... so I haven't... kind of find such a friend in here... I have got some but... to be honest if I would ever... move out from London I don't know if we... will keep in touch... <mhm> um...

[long pause later filled by making some "thinking" noises]

I don't know... you feel sometimes that... like now with the Brexit... Poland is kind of on the side because everyone keep saying like "oh because the Polish people... here and there"... um this is not really nice thing... what else...

<03.33.291>

I: so how-... so that-... talking about Brexit makes you feel...

<03.39.020>

P: um... not that much personally... <mhm> I've had never e-experienced any ... like... bad things about Brexit or about me being Polish... but... um in general... like not knowing what's going to happened and as we are... Polish people which are not really wanted in here... at least from this TV pierce- perspective... then it feels kind of like... um we'll see...

<04.15.940>

I: so the uncertainty...

<04.17.340>

P: mhm... yeah...

<04.18.804>

I: OK... um you said you- you know you're not welcome from TV...

<04.24.922>

P: that's what I heard I *never* <yeah> watch TV... <OK> [laughs]

<04.27.928>

I: do you feel like you're not welcome because of your colleagues...

<04.30.581>

P: um no... <no> n- n- no I've never personally experienced any... kind of bad experiences... <OK>

what's good... um... [thinking noises] um... what else what else.... I don't know... nothing... travelling is quite important for me so it make it so easy... like really really easy... um...

<05.01.571>

I: why is it easier than- than from Poland...

<05.04.648>

P: because... um... you can save from your one salary for a ticket wherever you want to go... so if the ticket cost you four hundred pounds... in Poland... that's the whole salary there isn't it... the monthly salary... um so :to save it you'd have to save like six months... or something like that... where here you get you own salary this month and you can buy your ticket... out of it... so it's easier... [laughs] and um... you know there is not many such cheap um countries like Poland in the world... so if you going somewhere else let's say even in Europe like Italy or... Spain and you would have to spend a Polish money which is like four, five times more... than you would not enjoy that much because you would not go... I don't know... for pizza which costs you a fifty... um Zloty... like every day or twice day there you would go like once in a whole week... <mhm> something like that where here you paying ten pounds p- for pizza and it's normal isn't it... because that's the amount you- mo- of money you paying for normal pizza... f- f-... like everyday if you'd like to... let's say

P14JM

<00.00.032>

P: um right so: I guess the best thing... um about: being... a migrant in England is... um... opportunities that you: um... could experience by living here... um this is probably mostly because... um because of the European Union... um ex- workers exchange framework that... Polish immigrants um were allowed to:... um participate in since two thousand and four right... w- ever since Poland entered the European Union two thousand and four... the former... Labour... Tony Blair's government allowed Polish workers um to register their interest for work... in different labour markets and... I came on that... second wave of um movement of- of labour... um so: I didn't have any difficulties with... [sighs] paperwork everything was arranged translations of my diplomas of my experiences CV and so on... so I didn't experience any difficulty in getting into the labour market because everything was legal within the... um broader European framework... um so in that regard it was kind of easy and I was even recruited in Poland right ... * not * <mhm> here... but I do recognise that some of the other migrants may have experienced more difficulties especially if they didn't speak language or... [a few false starts] and they wanted to have a job where the language skill was essential... um... so I guess... [sighs] that- that would be the best thing that... there was an institutional framework that made- made it... all easier... um to-... to set up your life here if that makes sense... um... and I'm really thankful for-... [clears throat] to British government for allowing... um... me and my compatriots actually to- to benefit from that free... free- free labour exchange...

um I don't have any worse things... I guess... one of the obstacles for immigrants is this adaptation period... that:... you have to... [tsk] maybe you don't have to but there is... I'm not sure maybe this is only my head but... there may be an expectation in society that you have to prove yourself... um so that means... that you need to work maybe a bit more harder stay a bit longer... for a few years or so to... um... get... a similar level of r- recognition or respect if that make sense... um... where... the natives or the... local population would not need to show the- the same level of commitment in order to be recognized in the same way... but that may be just my subjective... feeling about it it may not be the *mhm* <truth>... um...

<02.53.317>

I: did you feel like this...

<02.54.795>

P: [tsk] I did feel as if- as though... um... [clears his throat] I needed... to prove myself um... and... I guess: you know that may be... a kind of... intrinsic social expectation of the native population that if you are migrant... then: yes we are going to welcome you here... yes we will give you all the opportunities all the rights and: social... um benefits and access to all services... um but you have to show your commitment ... um you have to show... um the willingness to:... um... adapt to our... social values our democratic values our cultural values um to know our... not just language but the customs... um the communications... um... skills and conventions so the more willing you are to tap into... um the original culture I guess the more... um... easier this process is going to be... so I did do that from the very outset I do like British culture so I didn't come here only to work but I... came here to live... and therefore I was aware from the outset that... um adopting certain... um British values and: um... commonly shared... um... cultural values is essential in order to be well integrated... um member of the society and I did want to be... um well integrated and: after a few years I- I managed to do that...

P15RK

<00.00.081>

P: mhm... th- if we start with the worst parts of... being here in England but... there's nothing to be honest specific like... it was: basically in the... very very beginning when I moved into England... and I struggled like super- [laughing] I really struggled with the British accent... so that was like really really amazingly difficult for me and: I can say like even if we... all as a Polish people we have a English... in our schools or universities or we have like extra additional courses with the English language... in Poland... it' still like our teachers are Polish teachers or eventually the Russian teachers... so that's the most difficult thing for me:... to went through... was accent... to understand the people... w-what they basically want from me and: in the beginning it was like "oh my God it's not English it's Chinese I can't understand you people what do you want from me"... and even if you know try to: have friends or I don't know do some shoppings or w-... whatsoever... and you struggle with the language... then you became more... I don't know how to say that... let's say that your anxiety level is- [laughs] it's- <yeah> yeah *it's going* <(unintelligible)> [laughing, in creaky voice] yeah exactly... so I think that's the... the worst part for me... when I moved in to England...

I can't say that the English... that I got like a really bad experience with any of the English people... because that never happened to me... even our neighbours- my previous neighbours... they - both of them they: they Irish... and: w- when we moved- moved in... they basic – they- they treat me and my ex-husband... as a family... they bringing us: fresh veggies or fruits from they garden and even if I- I struggled in the beginning to talk with them... they never said like "oh you can't speak English I'm not going to talk with you" or "oh my god... immigrants... you taking our job" or... the things like that so: I can't say that I... n- I never ever in my all life I be here... experienced anything-... anything bad from- <mhm> from the British people so that's- that's the only one thing where I can say... it's a accent a- but just because... our teachers they're Polish teachers... <mhm> with the Polish accent so it's easier to talk... <yeah> and saying like American's... English... <mhm> it's much more understandable for us... with the accent than- than the British oh I d- don't *wanna* <why> even... talk about the Scottish people (unintelligible)... <yeah> [laughs]

<02.31.064>

I: well w- why are American accents easier to understand... why is *that*... <I>

<02.34.507>

P: [long pause]

because of the accent how they pronounce... <mhm> so I think it's... <mhm> how they pronounce certain words even like the words t... ah there was one girl I remember... I couldn't understand her... and now I- I know what she said tha but she said to her ma [imitating] "ma: I wanna wa'er" I was like what did- what... what did you say... and yes then my colleague he explained me... "she said 'mam I want water'"... eh ... <mhm> [tsk] [laughing] that's the point so... yeah I think it's rather... how they pronounce... <yeah> like that they do not pronounce "r" or "t" or "h" in the- in the middle of:... of the words so... I think that's- that's- that's the difference... <mhm>

<03.18.826>

I: and what about positive *experiences* <posi- positive>...

<03.21.207>

P: oh there are much [laughs] they are not that grumpy [laughing] like Polish people... yeah... basically like... I think it's a huge difference between the Poland and the England like in general there is a... difference of course- cultural difference... and I rather... prefer English culture than- than the Polish...

in Poland po- people like rather they... expect from you like you have to... be the certain... person so if you... a slight different... or... much more open minded... you automatically... getting to be like a kind of the- let's say weirdo... and "oh we don't want to talk with you you have to be basi- the same like us... or... we ju- we don't wanna talk with you" I mean... you excluded... <yeah> so ... and... even during the day... I think that the British people they m-more relax... and more calm... less stress... than- than Polish people... they... less think about... unnecessary... so how to say this stuff... whatever... they-... I don't think so they overthinking... because I think that the Polish people they usually overthinking everything... what's happen if this what's happen if then or:... what my neighbour will think about me:... o- about my car or I bought a car who is like a twenty years older than my neighbour "oh my God what they will think about me" like... it's not like here... they basic- they don't care... even if you go to the Primark which is like the... cheapest shop let's say and y-you wear...

the clothes only from the Primark nobody will tell you o-... n- none will point you... “you wearing the Primark”... if I'm wearing let's say Prada... they- they- they don't care... they basically don't care so I think that's... the thing what I... really enjoy here in England... <mhm> like people are like... they- they people... peopley-people [both laugh]

P16MK

<00.00.000>

P: um... so I think... [tsk] with- it's- I think the- oh I'm a bit lost a little bit now... um so com- maybe I'll start with comparing... so in terms of... comparison that was the reasons why I moved here... why I didn't wanna be in Poland because I feel in Poland it's very everything... you know you have the path you need to follow like you need to go to Uni then you need to: ... find a boyfriend get married and then find a job and it doesn't really matter what you do like... it's expected of you to do that... <mhm> where here it's more... relaxed... and... and I guess you don't have that... you know... you... *aren't as* <pressure> kind o- yeah pressure but also like maybe... you know you-... you don- you- I don't feel closed in a box... and it's more opportunities in terms of job... it's even like when like I was thinking of... I probably could have: translate my degree now and go back to Poland... so still... my job here would be... much more interesting than in Poland... because in Poland I could only work in a... mental health hospital or do my private practice where... here is:... you know... I could just... literally change... do a little training and do a completely different job... <mhm>um... so in terms of that: I quite like the multi culture... that you know you ... even- even with food like in Poland it's still... you don't really get that many different food choices <yeah> it's like Polish cuisine... and you know sandwiches and potato cabbage... here you- you can- you know try all different foods... and even like you know for your own because you can learn how to cook here and you can enjoy it more and you know enjoy your life and: more variety... um...

also thing like living here makes you more open minded so because of that experience because you have variety... you don't-... you- you not like small-minded like so m- like when I go back home... I- well I stopped doing this now and at- at the beginning I'd make- I was really angry... when people would say things about whether that's mental health or anything... but it- it is bec- just because they don't... know anything else... they don't have that experience of it... if they would be more exposed to it then they would be able to... you know... to make their minds about it where-... where they don't so it's expected that they will be... thinking very straight... um... so like that... um... what else...

[long pause]

what's the worst... what was the- what was the best and what's the *worst* <yeah>

<02.31.921>

I: what's y- the worst thing about being a Polish migrant... in England...

<02.35.220>

P: [tsk] I think it feels like at very- like at the beginning it feels very overwhelming... and it- you feel very like... degraded... to:- to yo- y- your position... until you-... I've- well in my experience it was language... which- which did that to me because I wasn't able to express myself I wasn't able to do things which I wanted... cause that was always the... kind of barrier... where... now I feel like... well I- I have a life here which... I wouldn't mind having in Poland... where at the beginning I really struggled because that make the whole immigration-... or emigration... even worse... <mhm> as in experience because you- you don't have your family... very often in the beginning you don't have friends so... and you cannot do things which you would normally do so that makes you: very... isolated... um... and I think opening up like it- it's so- it definitely changed- my experience changed when I opened up that I decided that I stay here... and... then you know I approached differently like English people as well... their culture... at the beginning I was very much like... "ooh they have no culture they have no food it's just like roast and then nothing else"... but then actually if you open yourself up that-... there are- there are things there... you just need to try it y- want to try it or want to see it... um... yeah I think there was something else I forgot now...

[tsk] oh yeah with the- with bad experience... you still feel a little bit... this- it's still- a little- like sometime- well n- quite often... depends what kind of environment... but I would still have a little bit of like... anxiety maybe that you know... if they hear you Polish... kind of like... "oh you here to take our jobs" or: you know... "oh so tell me how bad it is in Poland... because you had to-... that's why you have to move here" <mhm> um so it's this expectation that you had to move in because there's no job and it's really poor and-... um or it's very cheap in Poland and then s- yeah... um... what else... but people are kind of willing to... to listen... I think... um... what else... what good experiences...

<04.51.292>

I: I mean the- the kind of prejudice you get... you've just mentioned... do you get a lot of it or is it just... *isolated cases* <no not really>

<04.58.976>

P: I don't really get-... so like-... I think-... and then-... in the past I would get more offended by them- by those kind of- now I just take it more like as a j- joke... and even if I did it's just funny... [laughs] and you know you can always challenge that or talk to someone... but that's the thing my confidence is different now where... before I wouldn't because I felt... as a... you know... inferior to them so I wouldn't challenge when now I'm kind of... I feel on the same level... and I think it's different as well... to like different... um... you know... states because we are in European Union.. I wonder whether that's going to change when we...Brexit... *because like-* <(unintelligible)> because we have the same terms we don't have to have that like working visa whatever... then... you feel more- you feel like you know... the life... conditions are very similar to what they have... where if y- if your life is dependent on like working visa and everything else then probably it would be very different and you feel... much more... kind of... yeah... dif- different than- than- than they are...

P17SP

<00.00.075>

P: so um... [tsk] um the worse and the best um situation experience um as a Polish... um immigrant also as a- as a general immigrant... so... [tsk] as the best... I think um it's ability to:-... to work and earn... um... money which can allows me to um live in comfort... um... to be able to:... earn as much... um money as I need to: um pay my bills to cover my um general um needs... um to:... um be able to um pay... a rent... be able to... um buy... um foods and be able to... um [tsk]afford um... um... services or- or things which actually um would like to um have or... [creaky voice vocalisation] um and also... um I would like to... actually... if I- if I would like to do um some hobby... um so um salary... in UK is allowing me to actually do all- all sorts of hobbies and- and-... yes so this is very good aspect of um be immigrant and... um... and I am happy that I have got this opportunity to- to um to work in England and be in this position which... um is- is a but privileged and: there is um vast majority- v- vast amount of people which... actually um w-would like to be in my position... in my- in my shoes... and-... and- and-... yes so um... I have to be thankful you know to- to um... um to:... to God you know that actually I am- I am here and now and even you know this experience is um is quite- quite nice...

[inhales sharply] so yeah that's- that's the um a good side of being um immigrants... um there is of course you know... v- vast spectrum of the- of the life um... a:- and- and a lot of- a lot of good sides of being immigrant including as well in a meeting new peoples from um from um... around the globe and sharing experiences and thoughts and- and... um basically um um... um... and- and- and... um seeing different mentality... and learning different um different um... um approaches to the life to- to- to um... to people to things to- to you know... you name it... *um* <mhm>... yes so:...

that's why... living in UK is- is- is so good and so privileged because you know we can um we can try different cuisines we can n- try... different languages we can try different mentality we can actually um... um... we can speak to- to d- different people so that's- that's the- that's the... you know great- great um... advantage of being immigrant... and... so... I would be I think...um if I: wouldn't come to England... I wouldn't be aware maybe even of um... of such a... vast and broad um... worlds and- and different- different approaches to- to- life and to... um... to- to self and to- to people and so... England gives me you know this rich experience... because in Poland... <yeah> I would be stuck in kind of um... fish pond

with you know same fishes... *while* <yeah> in UK I am- I am in vast um... even maybe sea... where:... I can- I can see different... you know type of fishes and- and- and this I like a comparison... <yeah> um so that's- that's the [sighs] upper side that's- that's- th- that's the [exhales]... um... that's advantage that's the you know bonus from the life um...

from-... from downside... um... I have to:- well I had to... um adapt to: the: new reality and um learn new skills- social skills to be more wise- street-wise um... um learn a new language um apply this language... then um test what is actually um good um in my behaviour... um... and wait for feedbacks from the society and: and then adapt again you know in- with different approach because... in some situations um our Polish approach to... um the society- the situations doesn't work and: we are... um pushed away um... with- with- with- from the-... or ignore or- or pushed away a-... from the society and then um we becoming um... um ignorants and angry... and: we blaming different people but the thing is that... we have to adapt to the situation to the- to the reality in UK... um [tsk] to- to some c- certain... socio-um social um... um mechanism... and:- and- and behaviours... so... um... that's quite interesting that... um we... um... we changing- we changing and: in same time... um we um... we gaining massive- massive knowledge which we wouldn't be able to- to have in Poland if we would be... still- um if I would be still living in UK... sorry in Poland so... <yeah> so um because of that I am thankful and... but I: [sighs] as a downside I was- I was um stucked- um stuck in some kind of um... um... place where I couldn't... um understand um... situations people and I couldn't actually figure out... what to do how to behave w- what to learn... um how to adapt... and I was- I was in some kind of depression because of the: situation... because of the:... walls around me... but: as soon as I um realized how to... um get around some certain a- walls and- and problems... I start um feeling um good- better... better and- and motivated and my um self confidence um grew... and: I became um... [tsk] um a differen- different person I- I- I think you know I could even say "better version of myself" um... so um... yes so the-... I think b- the pain and- and- and problems which I met on my path I think made me... um a bit stronger and help me to grew up

P18SB

<00.00.207>

P: I believe for me it's the same thing is um... being part of the... vast majority of people... from Poland... because... Britons quite often... thinks about... the European... the eastern European people as... Poles... <mhm> um... without like trying to find out whether you're from Poland Latvia Lithuania et cetera they just think "oh... you Polish you- you from Poland"... so: quite often... I find it a little bit... irritated *because they-* <mhm> they judge you... just at the beginning they- they- they look at you they- they hear the accent and they just think "oh ...you must be Polish... no doubt" but on the other hand it was also quite good because there are so many of us around there's so many Polish shops and we don't really have to struggle with like Polish food etcetera and... there are so many different communities... we can-... and so many events we can attend to... so on one hand... obviously this is like a drawback... and on the other hand it's- it's quite *positive* <(unintelligible)> thing as well so I don't know whether that actually gives you an idea of... <mhm> of whether or not it's- it's a... good and bad thing ... *I don't know* <mhm> what other people think but I think that- that is- that is my opinion...

looking from the career perspective... and from... um... like... the educational point of view... then definitely... I- even if I decide to: ... go back home... I should... be in a position to compete or even... um... be selected among the candidates... between... like Polish and... o-other... well... just talk about Polish... among Polish people... because "A" I finished the university here... and "B" is because I've got experience from the UK... <mhm> so quite often... the employers... quite often the employers value this... <mhm> and: ... even *last time* <you mean a->

<02.19.433>

I: my ex- um... having th experience of migration.... that is what is valued or... is that what you mean...

<02.24.788>

P: no not experience on migration sorry ... experience: like the work *experience ok sorry so* <work experience ok yeah> we talking about the migration...um... I didn't mhm... I'm just thinking why often people say that... they wouldn't do it... because they- they prefer to live

in they own country it's- it's very difficult... <mhm> it's not easy because you basically *giving up on everything* <is it difficult for you>... nah... well it was at the beginning because obviously you:- you just have to start... y-your life... from... you just leaving everything you have to start your life from like... scratches... <mhm> you just come with one suitcase and you have to:... sort of find yourself find a way you:... you live in this country... <yeah> but now if I... ever think about whether- whether or not I want to go back home... then I just think “mhm”... I sort of get... into: get- get used into this culture... and I'm more like nice and polite... and I'm so helpful to other people and... I wonder whether... I would be easily... um.. whether I will be you know able to- to work in Poland and- and get used to the cult- the Polish culture... although it changes nowadays *as well* <mhm>... but...

<03.47.148>

I: <yeah> so are you saying that... this culture... um... there's more emphasis on politeness or...

<03.52.158>

P: yeah that's- and that's what I like yeah when I... went to the United States came back I remem- I- I was almost all depressed because I had to come back to the reality and the one that everyone was like saying how-... how... you know b-bad... the situation was or how... how they struggle with: few things etcetera whereas in- in America they- they try to think about positive things... and I think it's the same here... people are just- just say welcomed they- they try to see the good side... rather than the bad side... and even if- in the way we: talk... even if I try to encourage for example my son to learn is I don't tell him “you have to... learn this or that”... no it's I'm trying to encourage *him to-* <mhm> to show him... the good side so...

<04.43.561>

I: so would you consider going back now really or...

<04.47.262>

P: um... well the plan is that... we would love to... go back in: maybe four five years time... but obviously it all depends on my son whether- whether or not he would be able to... read and write in Polish and communicate he's sound in Polish so obviously... that's- that should

be okay... but I don't really wanna leave it too late because then it would be more difficult for him... and now with the Brexit we don't know what will happen as well...

<05.18.849>

I: are you a citizen...

<05.20.279>

P: no... <no>... no... so yeah I will have to apply for... resettlement or whatever...<re-residency> *or redis- residency* <permanent residence> *something that* <yeah>... so- some- something that will... require-... something that I would require to have in order to... stay in this country... work in this country...

P19MI

<00.01.029>

P: so I think the best... um out of it would be: my friends... <mhm> okay... and um... the Polish friends that I met... um... which I think I made f-friends for life really... and- and also the: international people I met so to- so friends from different countries English friends... Peruvian friends Spanish friends... um Greek friends... um so I think that's something that would... have had-... I would-... there would be no chance if *I was* <mhm>... to never to come here... *basically* <mhm>... and because where I come-... <sorry> *where

*[laughing] I come from um in Poland *it's* <yeah> basically tiny little *village okay* <mhm> so it's like seriously everyone knows everyone... *OK* <mhm>... and even... you know like your neighbour knows more about you *then*<where are you from>... oh it's a small um... a small village near um XXX... <mhm> yeah... *um* <east> yeah... and um... and it's even- I mean... [sighs] is I don't know um... do you reckon- I don't know the- the- the the next- I mean XXX is- is- is obviously big city but the- the- the nearest um... a bigger town is XXX *I don't know* <mhm> if you've heard of XXX... so yeah... so: so: so that's that I think my friends... the friends I've met um here... would be the best thing that happened... um... the worst thing I think is being far from my parents cause I'm very close with them... so my brother lives here... so that's fine that's sorted... *my best-* <mhm> my favourite cousin lives like couple of houses down from here... which is... fine... um... that's perfect it's just my parents... *because I ge-* <yeah> I get worried I think that was always my worry... that you know what's gonna happen when- when they a bit older because it's only the two of us me and my brother and: you know when they get older... what- what's gonna hap- g- will one of us have to come back you know what- what if one of them... um... had an accident or whatever you know will we have to: turn our lives around and- and just go back and just- just take care of them that- that was my biggest worry... always... and: I think so that would be the-... so the plus side the downside is my parents being in Poland... but... I think the... kind of the middle side... which... I: ... don't think wi-... that just who I am now is- is- is- being an immigrant... which is basically when I'm in Poland... I'm thinking... what's happening here and what's happening with my friends what's happening at work whatever but when I'm here... I keep thinking "oh what's- what's happening back home you know what's the weather like" and they keep sending me pictures "oh it's snowing oh it's raining or whatever in-" and... and I think "yeah" so it's just being in between... type of

thing... um I think this... is who you become and this will basically never end you- you just changed [laughs] <yeah> you just changed and- and um yeah cause...

<03.06.787>

I: how do you think you've changed...

<03.08.358>

P: um... I don't know... it's- it's just... you trying to get- y- you trying to... grab best of both... and- and you really can't and- and you use- because like... I've got friends here w- um... um who:... is a couple- is a Polish couple and... um the girl parents are live here... so they've emigrated and- and the guy's parents as well... so basically their families is here... *okay* <yeah> and we all feel so jealous of them because... because it's basically like they all moved here you know but... [sighs] it's hard to explain it' just I don't know it's umm... cause when- when I talk... I don't kno- th- when I talk to my friends in Poland the- the- people that never... visited UK and never emigrated they- they basically got married and- and they stayed... um... somehow they think I've changed even though I don't think I have... um... is- is just- is hard to say- is just that you stuck somewhere in between and you never gonna... either way you go you gonna miss something... <yeah> so um... maybe the only um... maybe the only thing you can go i- y- you can do is- is basically go somewhere else [laughs, then both laugh, then laughing] divide yourself even more... <yeah>

<04.29.389>

I: yeah... um... how do they-... how do they think you've changed...

<04.32.811>

P: I think they- th- I think... [creaky voice] from like a really shy... girl... um from like... I don't know cause like even... umm... they're not family but family friends... a good family friends they basically... they expected me to like give up after two weeks come back and start crying and hide somewhere and never *go out* <mhm> or whatever and- and I ba- I basically proved them wrong and... and umm... so obviously the:-... I think it just-... even though I- I'm- I think I- I've not changed obviously i-... it gibs- it gives you that... I don't know you- you start to believe in yourself a bit more and-... and um you- you take a step back from- from that that ch- that tiny village life... where... nothing changes for like ages... um ... and I think it opens your horizons as well... because you- you- you- you know pas-...

you know... people on- people are opinionated and- and sometimes they know nothing about a certain thing but they've got their opinion and is huge and... <yeah> and- and you know so they can think this that or the other about the UK or this that and the other about Poland but they've never visited either of them... okay... but the opinions they have they're just like you know and you just... it makes you I don't know I think just... you take a step back from it... and... you just learn to accept it sometimes you try to change it but you know it's not always worth it I don't know it just... it changes you *forever* [laughs]

P20JL

<00.00.092>

P: and the best things... um... of being a mi- a- a- a migrant um... are... the experience um I... I have um... [sharp exhale]

<00.16.472>

I: do you mean work experience or life experience...

<00.18.459>

P: it's a life experience that um it's being given to you um... I don't know what wou- would have happen if I was in- in Poland r- right now... I could only imagine I would live in a... in a... big city... <mhm> um... to have a... well paid job um you would need to live in a big city... um... Reading is a... c-compar ing... Reading to:- to- to Poland it's a... it's the same size city... um but the cost of: living here [tsk] um... I think it's much better... <mhm> um of course we came here... m- for a job... <yeah> um... but in the end it end that um we stayed here because we liked it... um ... me by saying "we could always go back"... it's not necessarily... the truth... but um... being here for th:irteen years um... [tsk] maybe it's not half of- of- of- of- of my life but um... I got used to it so much... that I would um... struggle especially at the very beginning if I wanted to-... to go to Poland I would need to start from the very beginning... um getting a job um... first thing um... um...

there are many advantages [creaky voice vocalisations] if you have a family um... [tsk] you being looked after I think... <by who> by:... by the whole system that [creaky voice vocalisations] the schools are... [tsk] um... set up um... it's um... for some of us it's a little too early to send kids to school but I think that the system is- is good... *this is* <mhm> my personal opinion... um we are happy with a outcome of the school... and: we look in this direction because of: w- us being a- me being a parent I think that um... um we should stay here...um for the good of my kids...

um... what is: bad about being a migrant um... it's only based... on... on the ad- adventures that are- I- I came across in the past over... I come across currently is it at work is it um everydays um you will-... I think you will always find people... that are... better and that are... not so much good um... [tsk] it is a- how they've been brought up... that matters that w- they will respect you or not um *because of* <mhm> course they are... um here... they can

um call you migrant... but it's- it's up to me if I take it personally or not... um... again I- I- I can tell you if I was in my country I don't know how would I react to people that um come from a...abroad... um... [tsk] and I- I think because I am still here... it's um... it's more good things than bad things *i- in* <mhm>... in this country that come for me and this is just from my personal opinion... <mhm> um... what else...

<04.05.654>

I: you said you would stay here for-... that kind of struck me- you said you wanted to stay here for-... b-because you want your children to- to have a better... start in life or something – I can't remember exactly what you said but um- so you're doing it for your kids but what about yourself... are you happier here as well...

<04.24.248>

P: I'm happy... ah... yes I- I-... I'm- I'm a person that... finds... um... positive it out of... nothing I can say wh- where some people are very... neutral *I take it as a* <mhm> positive thing... so... because I've got something... I- I take as a value... and some people because they've got something take it as a... normal thing... I think um... do you know what I mean...

<04.55.980>

I: mhm you don't take things for granted...

<04.57.987>

P: [tsk] yes... yeah... um...

<05.03.317>

I: so do you regret- you don't regret coming here obviously...

<05.06.377>

P: I... don't... I don't regret no... <mhm> I um... I've- I've had options to stay in Poland I've had options to come here... umm... I've chosen England um I'm still here... umm... it's only... oh maybe one percent in my mind that- that tells me... “what if” but um... it's not really this much <mhm>

<05.31.569>

I: and why England why not somewhere else in Europe *or* <um>...

<05.36.000>

P: because of the language... um... and because of the opportunity that we had at that time... *our cousin* <mhm> was here... so we came here...if I didn't like it um... I was- I was about to go back... um I was thinking about States... *which was* <mhm>... um money-wise... not very... cheap... <mhm> but England... um... [tsk] actually... I would have preferred to live here than in the States... this is just my personal opinion <why> um... [tsk] sometimes you feel inside um... would you rather live in States would you life- [creaky voice vocalisations] rather live in England and um... [sighs] sometimes there is n- no answer it's just how you feel... what's in your head um... I can't tell you what's in my head [laughs]

<06.34.712>

I: so your... gut feeling more than... <yeah> yeah... maybe it's the distance from your family right...

<06.34.628>

P: it-... it-... v-... very much that um being in the States... will give you very little chances to go there every year... and um... when you used to... go... at least twice a year now... once a year... we- we must go to Poland and- and visit the family

P21KP

<00.00.273>

P: so basically I would say that the best... thing that's happened to me um the best... part of: emigration is: a challenge... that: I took... um because I do like challenges and I feel like I'm developing... um because of that so: I really felt I have changed sw- since we moved here... um in a good term... so: it's like I feel more... self aware... confident with myself because I know I can do things that... like I didn't think I could... and: basically that I can more than I thought... <mhm> it's like when I checked that and experienced some... um... [tsk] I wouldn't say difficult sit- or maybe some of them were difficult maybe just not... um... so easy because um... they were new and I was alone and: I w- had no one to... ask for help... maybe... yeah... so basically because it was a challenge and um... I can feel I managed that really well... <mhm> that makes me stronger... this is the m-most positive I think part of... um immigration... <mhm> emigration... um ... definitely um... I would say that there are two things that I find the... m-most difficult... one is um being far from my family... it's definitely something um even if I d- don't struggle a lot with that it's still something that I think about quite a lot... "is it worth it... is it worth to be so far from them" um... especially that we... we- we have no time [laughs] we have not enough time to... spend to each other and... m-yeah... that's that- I- I miss them a lot even if we: um speak quite a lot um by internet... and we: see each other a few times a year I still feel that it's: like I need them in everyday life... and um it's: just so nice to um have people um popping in and: you know... [creaky voice vocalisations] being... like unexpected [laughs] just- just like that... um... that's something we- we can't have any more... when we are here... and one more thing is that I still feel that my English- as I said it's not good enough and I don't feel I can express myself um... um as I would like to... it's... just a:- and especially that's um in Polish I- I feel I can do a lot... and Polish language is one of the tools I'm- I'm using very um... confidently and... um maybe my expectations are too high that's um... I would... ever be able to do it in English as well... but probably I won't... and this is something I struggle a little with... so... yeah maybe-... probably they are... just these two things...

<03.20.961>

I: so you *feel like* <mhm> your language- um... you feel- obviously I'm not saying that's the case... but y-you feel like your language is... is holding you- *is holding you* <is a k- is a kind of limitation and that it-> back a little bit <yeah> in what ways...

<03.36.766>

P: [tsk] both professionally and personally it's... um... (unintelligible)

[long pause]

cause I've never experienced any situation that my language was um... like a kind ofm... I don't know my weaknesses or- or something like that... I- I've never heard from anybody that you know it wasn't good enough to: do any job or something like that *so* <so> so... <so is this- it is something you feel> yeah... *it's de- it's definitely* <why is..> something I feel... it's not the message I get from people... um... as I said it's maybe because I keep... comparing... the way I can express myself in English and Polish which is: obviously... you know it's: so different levels and... I also feel... that I-... especially in the spoken language I don't use: um English... um the way I can do that in... written language... like... I can feel I use just a part of that... and when I- when I speak and then: when I think about that... I: can see where I could use: ... um more... like I would say sophisticated language or: more... [creaky voice vocalisations] complex or... you know what I mean I- I just felt it's just... too simple [laughs] and- and that- that makes me um feel that [creaky voice vocalisations] you know I'm- I'm not expressing myself... the way I would like to and I'm- I'm not able to play... um ...with... that... language as I can with Polish I can't... say... [creaky voice vocalisations] things in so many different ways to show the different... feelings emotions that are involved... yeah ... but definitely it's my- it's my feeling <mhm>

<05.40.804>

I: any other... benefits... h-how do you think this... whole migration experience has... <mhm> helped you...

<05.47.713>

P: *definitely* <or...> the level of living... like especially I'm um... [cvv] thinking about money... and: the value of money and: for:... what I earn I'm able to live on a... higher level than I used to in Poland... and that makes me feel a little bit saviour...

<06.11.098>

I: *excuse me* <um> what... sorry...

<06.12.047>

P: saviour... like um or... not “saviour” it's um... <safer> [tsk] yeah...

P22SJ

<00.00.048>

P: my best experience in the- in the England is... I met... um very nice Polish people...
<mhm> um... in Poland... we are so... um angry... we are so: um... we- we are without...
smile... <mhm> um..in here... I've met... people with um... with smiling ... they are very
nice... they um... they are happy... in here... <mhm> um... when I-... when I'd like come
here... someone told me that... Polish people... is very... um...

[long pause, then says "jealous" in Polish] <jealous> jealous... yeah...

<01.11.973>

I: *so who- who told* <they- they- they are th-> you that....

<01.14.001>

P: um someone who: went before me here... <mhm> my- my friend... that is- um the- the
Polish people are very jealous... <mhm> and very angry for another people... <mhm> and
um when I come here... I didn't um see... <mhm> the- people like that... I met... very nice
people... <mhm> Polish people... yeah... that's my experience the- the good experience with-
with...

<01.43.438>

I: did they help you those people...

<01.45.468>

P: yeah... [tsk] yes they- they-... they are very helpful... um... I have lots of um friends...
<mhm> um... they lovely... <mhm>

<02.03.382>

I: and what about- what about your worst experience...

<02.06.466>

P: worst...um

[long pause]

I don't think so that I have any...

[long pause]

yeah maybe it's um... yeah... long time I miss um in my family... in Poland my sister and brothers my mum...

[long pause]

when I come here... <mhm> the weather waf- was um... not good for me...

<02.46.370>

I: the weather was not *good* <weather>...

<02.47.854>

P: yeah <yeah> but now... it's okay...

<02.51.686>

I: why-why was it not good for you...

<02.54.249>

P: um... raining... <ah ok> raining [laughing] yeah... <mhm> um... cold in Poland it's more sunny... <mhm> but it's OK... now... now it's OK... now I'm okay here... um... what else... I separate with my husband here... <mhm> so we don't live together... that's my... worst... experience...

<03.32.817>

I: is it because of... do you think if you were in Poland that wouldn't happen or...

<03.38.148>

P: um no it was start in Poland so- so... it's just... I think that... if we will still in Poland it was same... <OK> it- it could be same... but yeah I'm- I'm very happy here... <mhm> with my friends with my son... he's um... he is very happy he's um start... school here so um... his life is start here...

<04.11.123>

I: how old is he...

<04.12.023>

P: um fifteen... um he is prefer England... <mhm> Poland just for... um he's every- every year he's go with his Dad to Poland um for: summer... <mhm> summertime... and um... he'd like to live in Poland... but I told him [laughing]that... um... it is just for holiday ... he don't know what is there in um... if he will start school... yeah but he is happy with school with um his friend... so... he's happy I'm happy too [laughs] <mhm>

<04.52.159>

I: *so* <yes> the only thing... you're not happy about... yeah... you miss your family in Poland...

<04.58.571>

P: um yes... but they sometimes they come-... come to me I come to Poland so... <mhm>

<05.06.882>

I: anything else that you think maybe is better in Poland or is everything better in England
<um> [laughs]

<05.13.065>

P: the- the- the weather is better in Poland... the viewing ...England is very um interesting...
<mhm> I like to... I- I- I- I like visit some castles- [mispornonunes the word, then self-corrects] castles... <mhm... mhm...> um...

P23GD

<00.00.781>

P: I'd like to:- to see... positives only... [laughs] <mhm> but um... there must be some negatives as well but... um... what I'm thinking um... well definitely... being migrant: ... um... the fact that I've um moved out from Poland... it: gave me... lots of opportunities to... probably change the way I look at the... things... like in general... um... probably... wouldn't be able to see things the differences if I was um... in Poland all the time... maybe I would I don't know but... can't really go back in time so- so... hard to judge but um... um... definitely... I've become... bit more-... or ... lot more open minded... um... cause as I come from a: very small... village... from the country... I really doubt I would have um... so many opportunities to: meet people from... um... such a... variety of um... well... countries um so many: different nations and um... even um... I would probably: ... never had opportunities to meet so many... Polish people from different parts of Poland... as I've... did in- in in UK because um... I would probably be:... staying somewhere in one place in one location over there... so I would be: focused on that and that's it that's where woul-... well that- that's where w- my- my- my life would be focused on... um... [clears throat] definitely... um... does have a positive um... positive impact on um... travelling in general... <mhm> don't really... I'm not really afraid of- of changing the location... I mean [laughs] the funniest of the... um we had some thoughts with my... wife... for some time now that we probably would like to: ... go... to Poland back... and live over there... but that um feels: bit more... scary than changing the location or- or a job over here than um going and applying for a job... in Poland... <mhm> um... maybe because of... that... that I've never-... almost never worked in Poland... I just had a: maybe two little jobs in Poland as a- as a student or just like um very short um... *short* <mhm> um term jobs and then... once I um... have done my secondary school I... went to: Sweden I lived over there for a bit... and then every summer when I had um... um... summer holiday from- from university I used to go over there... to work over the summer... <mhm> so [laughs] and then um once I've um graduated I- I've come h-... to England so... um... what else...

[long pause]

[tsk] well definitely definitely: um... living over here is um... in many ways a lot easier than in Poland... as ex- an example I can s- I can say um... [tsk] when the kids were born... even though I'm... migrant... from Poland... I'm not a: British citizen I don't have any- any... um

residency papers or anything like that *because I've* <mhm> never... worried about that... um... just took me a: ring- single ring to the... um registration office... to book a- an appointment and then um get um my kids registered over here... whereas when we went um to Poland um... was a lot more effort to- to get the... Polish ID for them [laughs]

<04.18.908>

I: more bureaucracy yeah...

<04.19.947>

P: yeah... yeah the- the way it um... is... basically structured um the... the system here is um... far more... efficient... for that and... yeah... um people are prepared to deal with um with um... multinational um... migrants... and people coming from different backgrounds and they- they just... they are just able to process that... <mhm> um...

[long pause]

<04.48.429>

I: OK... any- any negative... experiences... or is there something you- you don't feel that positive about...

<04.57.978>

P: um... yeah well definitely... [tsk] even um... though I've been here for: ... nearly ten years... I would say now... I: ... don't really feel like I'm becoming... [sigh] British... maybe not "British" but... I don't feel this connection with the- with this um community... I mean... um thanks to the... <mhm> little pub job... I know lots of people but:... in the longer term I feel I- I... don't really have that much in common with them... um... I don't know it's- it's may- maybe- maybe:... I am... limited with my brain or something in a- in a- in my- my thinking but um... that's- that's how I um that's how I take it that's how I feel sometimes I- I... don't really have: much in common to talk with them I- okay I can- I can have um like um... conversation about how are you what-... how was your week things like that but um... in the longer terms I don't know... I: feel like um getting um... on with: any sort... of mig-migrants is a lot easier than um than with Brits... <mhm> and then I do... think that um... older generation of Brits are... much more... nicer than- than the ~~younger~~... but... I don't know... maybe... maybe it's just me... my experience... um... so... probably this is um where our...

thoughts about moving back to Poland come from... that... we don't really feel like... this is the place we would like to stay... fo- for the rest of our lives...

P24WP

<00.00.348>

P: um the-... the worst thing is-... is um... is... to be away from... Poland and the family <mhm> is far and um... so everyone is missing each other... so that's worse thing actually... yeah... an um... positive things... <mhm> the best things... I think is um... new experience... <mhm> um... um learn of tolerance... to people... and... yeah the most... the best wa- thing is experience so <mhm> you can see... away... lot of thing you never um see in a one town when you are in Poland... <mhm> so I can learn...

<00.043.076>

I: when you say experience you mean... not just work experience...

<00.47.242>

P: no no no no no experience... (unintelligible)... fining new people new ideas...

<00.55.810>

I: OK <mhm>... you mentioned being more tolerant... can you tell me a little bi- what-w hat do you mean by this...you say you become more tolerant...

<01.01.629>

P: um... yes when I used... to live in my town previously only... um so... that was like you- you know... follow the other people... stupid things... yeah they say... like... I'm not really sure if I really want to t- say what I thought before... <yeah> I go to outside so... oh... I think exploring the: world is... is like a fantastic way to... learn... <mhm>

<01.28.499>

I: so... the way- your way of thinking has changed is that *what you said* <yeah definitely yes>...

but why- why do you think is that...

<01.36.426>

P: I don't know.. now... that was something like really bad... yeah but...

<01.41.077>

I: why do you think you've changed...

<01.41.147>

P: [tsk] cause I think it's... yeah because... want to be good for people... good... do... good things... *and* <mhm>... if you do something good... like come back to you... <mhm> simply... that's what (unintelligible) say... always... <mhm>

the best thing is ac- actually to explore... the world... see new things... that's- I- I believe this... you know to-... I- I feel like I'm rich but not all about um the money but about the:... other-:... what- what I discover... *in the world* <mhm>... in travelling... (unintelligible) like a... immigrant but... likes-... travelling... and immigrants as well but... travelling and (unintelligible)... around... the world...

<02.27.225>

I: do you- do you ever wish you had stayed in Poland or- or do you you made the right decision to- *to come* <um> to the UK...

<02.35.461>

P: (unintelligible) I come back... when I be retired maybe... to Poland... I wanna... come back... but I always go... try to go somewhere... outside... explore new places... <mhm> see something new... and try something... so maybe like um... with adrenaline... things... yeah I got some... behind me like a bungee jumps or... sliding on very very high... slide or... other... attractive things... <mhm>

<03.10.923>

I: um... do you think- for your personally- life here is better than it would be in Poland or do you-... um...

<03.19.795>

P: economically yes... *that* <mhm>... I don't have to (unintelligible) um from phase to phase... I- I could note- note something to eat I can pay rent or something like that yeah... I got... enough money to leave every day and... save some money... and go to travels

something like that in Poland it won't- won't... got no chance... to work... and um... have for everything what I need...

<03.44.515>

I: why not...

<03.49.163>

P: I asked some people... if it... is any job for job... in a Poland... but that what they say... what I counted is difficult... all the v-... also... I live in here... is s- standard is higher... is difficult to come back to Poland and live in like a lowest standard... <mhm>

<04.05.933>

I: in what is the standard higher here wha- what's the- can you sort of...

<04.09.078>

P: a standard is... I think the standard-... I got money for:-... for everything I don't have to (unintelligible)...

phase to phase as it... previously... <mhm> so...

<04.19.184>

I: any other- any other differences or you know things that are... maybe better or not- or worse that- you know...

<04.26.120>

P: um... driving people... um more friendly on the roads... actually in a few years cause I've come back... often in Poland- I'm often in Poland that changed as well because... (unintelligible) still lot of mad people driving in Poland... in here... never happened if it's happened I know it's Polish *vehicle* <[interviewer laughs]>... or-... or someone not English... very rarely is happened in here f- stuff like is normal in Poland... or more-... not normal but... you can see it... every time you drive... previously in Poland when I used to drive every day I was passing- every day passing someone... now I just drive... drive... drive... follow the other cars so... I got not the feeling like speeding or... something else... <OK> it's different thinking... from that side... I feel...

<05.14.354>

I: is there anything you miss about... Poland or you think you would...

<05.17.952>

P: ala- always when I got to Poland I just take a bread with me to... <unintelligible> from Polish baker in here... even here we can buy in the shops Polish bread... it's never like that... in- in Poland when you buy (unintelligible)...

P25SM

<00.00.027>

P: well I think the worst experience it just kind of um... from a sheer point of... hearing the comment being made by um a uniformed officer... <mhm> I never ever had kind of problems with- with local community where I um lived... however I've been stopped once by the um by the Police and it was a routine check because they- they kind of had impression that I was driving a little bit too fast than thirty... and... I've got a British driving license actually I- I... I I took my exams in the UK however... um... I overheard... w-when I passed my um when I handed my driving license over to the o- pol- to the um police officer... whispering to the other guy "ah Polish driver" ... however obviously they didn't know my story that I took the exams in- in UK and I had a practical test um in here it was just kind of um... that- that kind of: tone of- of- of just... making a statement "oh... another Polish driver"... <mhm> so that was a kind of... I wouldn't say the worst because I di- didn't have bad experience perhaps maybe because I've never struggled with communication... however thi- this was a little bit upsetting...

I- I was thinking okay so what did the um previous Polish driver must have done... <yeah> so it's a kind of um b-be- being put in- in the- in the same bag with (unintelligible) "oh another Polish driver"... <mhm> so I didn't even engage in the conversation: like I don't know I would probably: go and say sir I- I- I did my exams in here I've got- I... I've got... British driving license wasn't converted from the Polish one... I just didn't see the sense because it was a bit... deflating to hear that from... a community officer that should be you know virtually neutral... um... yes so that's- that's the end of bad one... that probably will stay in my... memory for long... and the good one was from XXX um... I was going to the um um... to the- um to:- to the bus stop... I was going um to work and there was an elderly guy... who actually... um had lots of shopping... with him... um and he was carrying all of these bags I could see he's struggled because he had a little walking stick as well... <mhm> [tsk] so I- I offered to him that I can carry the- um the shopping... um for him and then it turned out that he's going to the same bus stop... as I do... so we kind of- I- I kind of adjusted my walking pace to his and I engaged a little bit um in conversation that was probably two thousand and six something like that two thousand and five... and then he's- he asked me um it was kind of um a- a local guy who lived there whole life... um so for him in two thousand five someone with a slightly different accent was something unusual at that...

um... time... so he's asked me um where: I was from... so I just um explained to him that I am from Poland and: from that moment it was really: great conversation he remembered from-... from the forties um... um Polish um... um army officers being stationed around Basingstoke and he always said that they were [creaky voice vocalisations] gentlemen and he kind of you know... he:... was feeling obliged to- to- to kind of pass his thanks for they contribution during the second world war which I think... um... was kind of... really good feeling... and on top of that um he:- he said something like "well I'm not surprised you helped me the shopping because this is how I remember your-... your fellow Polish people... <mhm> that's it...

<03.40.201>

I: is there anything you miss about Poland or...

<03.42.353>

P: when I was driving here I was thinking: with anticipation for a questions like that... <yeah> definitely it's a smell... of chicken soup on Sundays... [interviewer laughs] you know this is something that you can't really replicate... and: my:... grandmother's home made um noodles... for:- for the chicken soup... <mhm> um the proper um you know... um breaded pork... "schabowy" [provided the Polish word for the dish]... this is the thing that you know... when you far away you appreciate little things... <yeah> in terms of um... in terms of life no my- my- my parents were fairly successful um with they businesses... um m-my mother was actually planning to- to- to hand over her business to me... so actually I- I don't think that I- I would... be happier being- being in Poland because perhaps I would have to... make an attempt of um doing something for living that I wasn't... entirely happy with... <yeah> um so: so yeah... I think... the older I get... the longer I live here... it's the little things- the quirky things that are making you know return to Poland special even as a- as a tourist as a visitor... it's not necessarily the quality of life but the little things that you miss... yeah the customs... it's like... even when you go to Sunday Mass on a Christmas night... um it's- it's on a Christmas Eve- <yeah> it's- it's not the same because m-myself um... um being from XXX we- we've got really huge church it's- it's basilica so *it's-* <yeah> it's really massive with- with big organs and really good acoustics so... you know singing Christmas carols being surrounded another five hundred people it's something special... <yeah> it's not about um... being Christian Catholic head but it's about the end of the entire

experience... um so you know these are the little things that you appreciate um... miles away...

<05.42.360>

I: what's the best... thing that migration has given you or... if that makes sense...

<05.46.172>

P: yeah I understand it's- I- I think the pace of career progression... <mhm> if you set yourself goals- un- unfortunately Poland is still on- on- th- many levels in that pot- post communist system when you need to have... good connections to secure yours- self a desired job... I- I know it's- it's- it's changing but unfortunately I'm not IT guy... <yeah> w:- who's usually in high demands wherever you go... you know I come from a profession where... there was- in my home city- about two thousand graduates... a year... <yeah> a- as you can imagine you... cannot fit two h- two thousand hotel management graduates in- in- in Poland... um and another thing is that I kind of... I experienced coming over to England that the level of our education was really decent... that's why I knew I've got something: special to offer comparing to other nations coming over here... <yeah> so I think the sheer... pace and... opportunities to work in your profession... expand your knowledge and being appreciated as a... you know a- a successful um... employee... um with... being even a- a chance to- to- to develop yourself um in that professional meaning... um is completely next to none...

P26NM

<00.00.404>

P: um my experience so far was fairly... alright... um... *since* <mhm> the beginning I had (unintelligible) of the Polish... worker... which is not a bad level because... people tend to think that we are actually hard worker which helps... with finding employment and... keeping it... um... I have never experienced any racist call... with... rega- regarding me being Polish or something like so... no- not really m- many bad experiences here... um... what's the prob- I obviously... everyone is kind of attached to: um your... <yeah> ori- origins country so obviously you always gonna be missing some... kind of friends and family but... well if that's what we decided for that's what... we should bear... *so* <yeah>... yeah... what else... um... oh (unintelligible) when I'm introducing myself to numerous people... <mhm> usually the reaction is alright I can't say that after I'm saying that I am Polish they're... being... I don't know not nicely surprised or something like that...

<00.54.835>

I: okay so- um... so being Polish is not a- is not a problem... it is it an advantage...

<01.02.431>

P: I wi- I- I- well I can't say it's an advantage *I mean* <yeah> it helps you with the employment because obviously it means that... you speak two languages at least... and:... what... the Polish is not that important language ove- overall but... still yeah I think (unintelligible)... <mhm> work-wise I think it's like a... kind of an advantage but socially not maybe necessarily...

<01.23.119>

I: okay and what about um... what about- what's the best thing about you know being here... being a migrant...

<01.31.866>

P: well... living a fairly nice style of life and: being able to study um... getting to know new culture... being like more... world open because I'm also meeting many nationa- many nationalities in here... I don't know... black... it's an experience... *so far* <yeah> so good

<01.49.842>

I: mhm... um would you say that- because you said being able to study and work... would you- y- you wouldn't be able to *do that in Poland*... <I mean I would be>

<01.56.785>

P: but it I would be com- something completely different... um longer... probably harsher... um... first of all it's longer... here you study for three years in Poland you study for:... at least eight years in- we- in my case... <yeah> um it's not as rewarding afterwards and obviously as I said you'd be- I would be blocked in Poland if I finished the degree I originally wanted to do... well obviously Polish law allows you only to be lawyer in Poland and there are... no other al-... um alternatives outside of the border... what else um... it's always hard to be far away from the family... and... from home but:... that's it it's... *still* <but> ... <yeah> prefer a bit to be here... <mhm>

<02.33.988>

I: so w- what makes it better y-

<02.35.513>

P: more like... mentally healthy people I'd say without... some stereotypes... I don't know... Polish people are- well Polish society in general... in-... back then in the country... <yeah> I think it's a little... sick under some aspects because... in- in terms of definitely tolerance xenophobia:... hate... um racism and all of that and I don't actually need- think that... people need that... *nowadays* <yeah> especially... <yeah>... so when you live there you kind of ignored it but when you come here and see the difference like the real difference... you... juts make-... come to the conclusion that maybe that's just not the st- um... healthy per- um... healthy place to live... and... that's what makes my decision easier... <yeah> because... I don't know... I feel kind of be-... I've- like living here to be fair... <yeah> yeah... it's all obviously... it... (unintelligible) because of the higher standard here and... not only of my style of living but... friends you are getting to know... it's... I don't know it's quite easier to go like for a spring break somewhere with:-skiing or something like that with *friends because* <yeah>... everyone can afford that (unintelligible) in Poland... asking someone to go to France for s-... snowboarding I'm pretty sure that maybe I wouldn't be able to find

two-two people... *so*<yeah>... maybe also this aspect... so g- again... this is the... general standard of living...

<03.44.001>

I: so people are... y- you said they were a lot more...

<03.47.086>

P: *there is a lot of hate* <(unintelligible)> I think in... Polish society I'm not saying that there's not hate in here but I... think it's less visible and more... punishable I'd say... <mhm> yeah...

Appendix III: Semi-Structured Interview Data

P01PA

QUESTION 2

I can usually tell if someone is from Poland - by accent (no English accent), although I may confuse them with Romanians or Russians. But I am pretty good telling which continent someone is from - I can identify Eastern Europeans as a group pretty well. Also by poor grammar - (verb endings) - if their grammar is poor. We don't use slang or contractions - we use more formal language, which to NSs may seem artificial. We form longer sentences and it takes us longer to articulate them. Our tongues are not efficient/fast enough in English [as they are in Polish] to articulate things quickly - unless someone has studied English for long enough. We are more direct, and our tone is more demanding - perhaps not demanding, that sounds too strong, but more straightforward, direct. By appearance - in 50% cases, I'd say. We have fair complexion, fairer eyes, fairer eyebrows - typically blonde. We are also not so well-built.

QUESTION 3

Usually yes, in 60% cases. In 40% cases I have been confused with Russians or Romanians. At the beginning it was because of my accent - I didn't have an English accent at all. It was hard for me to speak English, I had to get some exposure, listen to English and learn how to say certain words... Also by my looks - I am a relatively petite blonde, facial features - they generally recognise me as Eastern European - perhaps my accent plays a role in this.

QUESTION 4

So-so. There's a small percentage of Poles who have exceptionally good English (30-40%) and the rest is average. About 10% has very poor level of English. We are not as good as some other minorities, as we used to be a communist country, so we were isolated - we didn't have contact with English. Many Poles can read and write in English, but cannot speak it well - our speaking is worse than our writing skills. I have met Poles who don't pronounce words well, and it is hard for them to communicate. Also some minorities, e.g. Indian, find it easier to switch between languages, as English is their second language. For us, this is a slower process that requires planning and forming a sentence in English - this is because we didn't have that experience of switching languages as children.

QUESTION 5

My English is fluent now - I can discuss any subject, but for some topics I would need more words. My colleagues say my English is good - they don't have any problems communicating with me. I haven't had much direct feedback, but I have never had any complaints either. I can confuse letters/make spelling mistakes when I write/type fast, but my messages are still clear to my colleagues.

QUESTION 6

Need was my greatest motivation for me. But I also liked reading texts in English at school, as I found it interesting learning about another culture. When I came here, I wanted to be able to communicate without any problems - also to be able to understand the people around me, as well as films and songs. I used to print out song lyrics and translate them. We didn't have internet back then, so I would use a dictionary.

P02PA

QUESTION 2

Yes, often. I can quickly recognise Poles by the accent, it sounds "square", some words are "hard", they don't sound "soft", they sound like when they speak Polish. There is no "softening". It's like they stress individual words. Also their pronunciation or how they build sentences. Also by appearance - it's difficult to say how, it's a gut feeling. You look at someone and you think - "they're from Poland". I am usually right, though not always.

QUESTION 3

No, never. People think I'm Spanish, French, American... It's funny, but I like that - I don't like it when they think I'm Polish. They can't really tell by my appearance that I'm Polish either.

QUESTION 4

It depends - in my old job as a technician, the people I worked with... their English was so-so... At that time most Polish people only came here to make money and go back, so they weren't bothered about English. The people I work with now, who want to achieve something, their English is better - but these are people in higher positions. When I was at university, many of my Polish classmates weren't bothered about speaking English even when we were with non-Polish speakers. That really annoyed me, and I would think to myself - "For goodness sake, we are in London, we are studying here - let's speak English!"

QUESTION 5

In my last progress review, my manager gave me "exceeding expectation", but she told me my written and spoken English were great. I do make mistakes, but I also do that in Polish. I'd like to improve my grammar though. I hear a lot of compliments, e.g. recently from a GP. Also from other managers or in my other job [police officer].

QUESTION 6

Since I was a kid I have been watching the Lord of the Rings, the Hobbit, I read Tolkien's biography - this was a huge inspiration. I always watched [English-language] films with subtitles - I was exposed to English a lot as a kid, and I would also translate song lyrics just

for myself. I had a crush on Orlando Bloom and I loved his accent. I have always wanted to come here!

P03GM

QUESTION 2

I can tell if people are from Eastern Europe, but not if they are Polish. I am not very tallented in this respect - I don't have a good ear. But I can tell by the accent they're not English, but they might as well be Lithuanian, Ukrainian, Russian... If they speak fluently, I may not be able to identify them as [Polish] unless they really butcher English - and sound really "square", a very strong /r/ - "I am Russian" [mimics using a tapped /r/]. If they don't soften sounds in a typical way, but I don't really know women like that. If there is no... this English "lalala"; if they use spelling pronunciation, confuse <v> and <w> (read words out the Polish way, e.g. vax and wax). I have a friend at work who cannot say "thirteen", so she uses /t/ - "thirteen" or "three" [pronounces with a /t/ and a tapped /r/]. I know this is difficult for her, as this is something we don't have in our language.

In terms of behaviour, Polish men tend to slouch, they seem insecure, radiate mistrust, and they try to cover it up with cockiness. I can also tell Eastern European men by their looks - Polish men are a bit ugly - it's a stereotype, but there is something to it - they have "Putin-type" looks. Russians are even uglier, also Ukrainians, Lithuanians... They don't have regular features, are often bald, have floppy ears. Not all of them, of course, but quite a few. I can't identify Polish women by appearance though - only by their accent.

My oldest brother [who lives in Poland] has a very strong /r/ in English, even stronger than in Polish - "good morning", "how are you" [mimics with tapped/trilled /r/]. I remember he introduced himself that way to my [English] boyfriend, and the way he said it struck even me. We still laugh at him about it. I'd never heard anyone our age speak English like that - I'd say he speaks English the way our parents' generation did - the way they spoke English sounded very hard, and so does my oldest brother. A complete lack of familiarity with the spoken form of the language - our generation heard English in songs - he didn't listen to [English] music - he's just so Polish to the bone. So he knows the spelling, knows how to say that, but he says it his way. My other brother or his wife don't have that [accent//r/]. I had an older lady at work, she was 60+ and she could barely speak English [she spoke like that too]. At school she learnt Russian or German, but not English.

QUESTION 3

Yes. Once or twice I have been taken for a Spanish person, but 98/100 I am identified as Polish... but I don't know whether this is because of my language skills or appearance - but I am sure the way I speak [English] has something to do with it, as I have been taken for Polish, Russian or Lithuanian - so there must be some common "tonality" that we share.

QUESTION 4

Polish women speak English much better than men and they are more comfortable doing that; men are generally insecure about speaking English. They didn't learn English at school - perhaps in the secondary school. A lot of Polish men coming here are builders, so many of them don't have the determination to learn English; they have never needed to learn a foreign language before. So they are uncomfortable with it.

There is also an age difference between people born after 1989 generally have much better English than older Poles. I guess this is because they came over because they wanted to, because they were curious, they had some friends over here or it was trendy. We came here because we sort of had to - nobody really wanted to. There was no work for us, no place for us... There were not that many Poles in the UK then, so that was not making things easier for us. But now, especially these younger girls, really feel at home here... Although this might be my subjective opinion. But on the whole we are similar to other minorities in this respect.

QUESTION 5

I think my English is very Polish - I don't have a good ear, so I don't think this is going to change. But I don't have problems communicating. I don't have an English accent, the melody when I speak is typically Polish. OK, I don't actually make too much of an effort, as I cannot really hear the differences [between speech sounds] anyway. My grammar is decent.

My [English] partner says I have a Polish accent. People complain I speak too quietly, but I haven't had much other feedback. They can understand what I say.

QUESTION 6

You [the researcher] have helped me, because you correct me, which is useful. And also my [English] boyfriend - e.g. points out differences between "butter" and "batter". You started the process, drew my attention to the differences between sounds. And now my boyfriend has sort of taken over. Before that I wasn't even aware of how you shape your mouth etc. Sometimes I can hear the difference, but I can't repeat [the word accurately]. When I arrived

here, I was so focused on word comprehension and grammar, that I didn't pay attention to accent.

I also had a great English teacher at uni; she really loved her subject and had a great accent - she made sure we were active learners and motivated me to learn more consciously.

P04BK

QUESTION 2

in most cases - by the way they speak, by accent - this kind of foreign English is clear and comprehensible [laughs] - "real" English people lisp and swallow sounds, e.g. "how are you" [imitates weak forms and a more colloquial pronunciation]. If you haven't had much exposure to that, you don't know what they mean.

I can sense that - it's hard to give a specific example. Polish people have soft tongues and pronounce "hard" letters [sounds], e.g. /t/ or /r/ - you can sense that even if they speak English; NSs "soften" everything.

However, recognising Poles used to be easier - the new arrivals, within the last 3 years, sound more like the English. They come here with good English, they hang out with English people and they kind of join their side...

QUESTION 3

Now when I talk to different English people, they say my English is good - that I have nothing to worry about. But I have also had to repeat things for people to understand me.

QUESTION 4

Increasingly better. It depends on the person, but on the whole it used to be easier to tell Polish people apart by their accent. Those Poles who have been for a long time they speak fluently, they have pure English accents.

QUESTION 5

It depends on the day. I can't speak English very fluently. When I worked with English people, sometimes when I went to a shop they thought I was English. On other days they couldn't understand me and said I couldn't speak English.

QUESTION 6

I was strongly motivated - when I came over I didn't have any English at all - all I could say was "yes" or "not". I came here with my younger brother who had been learning English and spoke it fluently, but still he wouldn't speak for 2 weeks or couldn't understand anything until he's heard enough and got used to their accent.

My work motivated me - after a while it became exhausting - not being able to understand what someone was saying. My brother motivated me too. Later I enrolled on a language course, and did a few levels, but had to drop out because of work.

P05ZH

QUESTION 2

Very frequently - by Slavic facial features, the eyes, which seem more familiar, more open. Sometimes I am not sure - I think someone is from Poland, but they're from Lithuania or Ukraine... Sometimes I can tell by accent: rolling the /r/ - as in "brother", "water" [pronounces with taps]. Also by [word] stress- they [Poles] put stress on the end of the word, not the beginning, e.g. "water" [wɔ'tɛr]. Also the melody of language and how they build sentences.

QUESTION 3

Not always - in fact, very seldom. My name in Poland is associated with older ladies, and my surname doesn't seem Polish at all. The way I look - darker skin, dark hair - people think I'm Spanish or Greek. Sometimes if I've talked to someone for a while, they can tell by my accent... When I speak to English people I try to have an English accent, but when I talk to Polish people, I don't care as much... People with good English/English people can tell I have an East European accent, but are confused by my looks - their image of a Polish woman is a blonde with blue eyes. Not that my English is very good, but I am confident. The way I speak is affected by how I shape my tongue - when you speak Polish, you don't open your mouth and your tongue is flat - when I started learning English I was embarrassed to "overpronounce" [says the word in an exaggerated way] - and so when I speak my mouth is not open enough and my tongue is not mobile enough - is kinda flat. Also the way I form sentences (e.g. questions) gives me away.

QUESTION 4

Polish people fall into 2 categories - people after universities with good English, which perhaps needs to be brushed up on, or seasonal migrants/older people - their English is very basic - barely enables them to survive. They [the latter] also use a lot of English words in Polish [with Polish endings], e.g. "trejka" for "tray". But I have also worked with people who have really solid English - and we still like to play with language. For example "busy" - "dzisiaj było 'busy' w pracy" ["it was busy at work today"] - Polish would take too long to say that. But there are certain words I only know in English, e.g. "courgette" - I had never eaten a courgette in Poland, so when I went home, I told my mom I wanted a "kurzeta" for dinner... [laughs]

QUESTION 5

They say my English is good - but I think this is because I am confident and speak loudly and clearly - I know I still make mistakes. English people find it impressive if someone speaks in a foreign language, but sometimes may not understand something I have said: "Oh, it's so cute how you say this" or "Your accent is cute"! I used to live in the north of England, so they pay attention to laugh at when I pronounce some words with a southern accent and some with a northern accent, e.g. when I moved back I used to say "Sunday" ['sʊndəɪ] - "Oh, go back to Newcastle".

At work I only work with foreigners, but at school [at university] I mostly have English people; they use slang and speak fast, so I need to adjust to that and they adjust to me. I have had situations when people were nasty - some racist comments. For example when I didn't understand something - "are you deaf, or just do not understand English" - but I think that guy was just having a bad day.

QUESTION 6

I came here at 18 to study in CXXX - this was a rude awakening. The English we learnt at school versus the English there... My Matura result was 94%, but here I couldn't even order food at KFC... I didn't understand my lectures, I then went to work - also in English. I was dating an English bloke back then so he was helping me a bit. I just wanted to learn English.

I am really obsessed with Australia, so I thought I would come and study here first and then go to Australia.

P06MP

QUESTION 2

I can tell by appearance - typically Slavic facial features - we look different than the English. I cannot really tell you exactly - it's just a first impression. By accent too - you can pick it out - I don't think people can master an accent perfectly if they are from a different country. The Polish accent in English is "hard". There are people who speak English well, but you can still hear the accent - this also applies to other nationalities, e.g. the Portuguese. We are quite characteristic, I think. For example, "thirty" [pronounces with /f/ and a tapped /r/], "can I go" [mimics a Polish accent, pronouncing every vowel very clearly].

QUESTION 3

Yes, because I am big and bald [clean shaven head] [laughs]. This is a thing - I can feel this; when I go shopping, I can see people don't feel comfortable around me... A lot of us Polish men are big and bald. Just take a walk in Oxford Road [a place in Reading with many Polish immigrants].

When it comes to accent, I try to sound more like someone "from around here" than someone from Poland - I try to stress words.. sometimes it doesn't really work, but...

For example, my wife speaks better English than me - she's been here for longer than me, but she has a "hard" Polish accent - when she is on the phone she is automatically recognised as Polish (I think). For example, she doesn't phonetically soften sounds, she doesn't pronounce words the English way, e.g. "where", "there" [produces rhotic, heavily /r/-coloured realisations]... You can clearly hear <k>, <g> - a typical Polish accent. Every foreign language is different in terms of its sound, phonetically...

QUESTION 4

I wouldn't rate them too high, on a scale 1-10, I'd give a 4... Based on my experience with Polish People e.g. in the Polish Pub. I know people who have been here for 10 years, and they seem to be actively avoiding learning any English, even a few basic phrases. I know people like this.

When I knew I would be going to the UK, I started learning English relatively hard. I knew the vocabulary, but not grammar - but I would make an effort. Sometimes I would attend my

English classes as one of the only 3 students. When I arrived, I went to an Indian corner shop and I couldn't understand a thing... It takes time to get used to different accents.

QUESTION 5

Mostly say it's OK - I have a good mate who is British, his parents are from Barbados - a really nice guy. He says that for an Eastern European I speak English really well...

QUESTION 6

Mostly say it's OK - I have a good mate who is British, his parents are from Barbados - a really nice guy. He says that for an Eastern European I speak English really well...

P07ZA

QUESTION 2

When I see someone, I *think* I know if they're Polish, but I am not always right, but I usually have 60-70% "success rate". Sometimes appearance is enough, but once they've opened their mouth, I can hear it - 100%. Except for you [laughs]. I can always hear those "flat" sounds, which I make myself [laughs] - a Polish accent. It depends how that well that person knows English - some people speak really fast, acts in a typically Polish way, and the sounds sound unnatural - for example our neighbour. English is a fast language, and its sounds are joined together - but she does it in a different way [from NSs]. Also the way the act - sometimes when Poles speak English, their "Polishness" gets through - the English tend have a more positive tone - even if they stop you in the street - the Poles sound more neutral or even negative - they hardly ever say "Oh, how are you?" [mimics English intonation]. I have seldom heard Poles say it like they mean it... Some Poles also speak really slowly - "how are you? Are you OK today?" [mimics with tapped /t/]. Oh, for example "today" - it's not "today" [pronounces with an English-like intonation] but "today" [pronounces with flatter intonation and a mock Polish accent]. Polish sounds, polish /t/. This is what I mean by "flat" sounds. Also they cannot differentiate vowel length. START from TRAP vowel. English vowels sound "deeper". Also, some people use spelling pronunciation to - e.g. "day".

QUESTION 3

Polish people don't know I'm Polish. As for the English, it depends if they are educated or not. People like XXX [an educated colleague who had lived in Poland] can tell. Or perhaps, it is more accurate to say that British people with no linguistic training can tell that I'm foreign, but they cannot pin down my accent, so ask me where I am from. I think this is because they haven't been exposed to that many accents.

I have even been taken for a Spanish person - I think this is due to my appearance - dark hair. Sometimes they think I'm Italian... I have also been told by an English person that they were wondering which part of England I was from, but they could have just been trying to be polite...

I speak to fast and pronounce English sounds in a Polish way - that's my style. I know there are phrases which I can say really well, but there are some which are still difficult for me.

Also joining sounds together - but I don't know if this is something I can still learn, or if it's going to stay the way it is...I don't have the energy for any additional study at them moment.

QUESTION 4

It depends what kind of Poles we are talking about. Those who integrate - quite well. Those who only come for a short period of time - they only focus on making money and surviving in a different environment. They tend to remain in Polish groups and communities, Polish pubs, shops, and so on...

QUESTION 5

They said my English is very good - that's what they say.

QUESTION 6

A teacher from the Teacher Training College in XXX 0 she lectured in [English] literature - she had this "flat" accent, but she made an effort. She was passionate for English history and literature - it was her who inspired me to do my degree [English literature]. Before that in my primary school, we would meet e.g. German students on school trips and we spoke English - I felt this kind of thrill when I spoke to people using different sounds, in a foreign language - and that enabled communication even though our languages were very different. I wanted to be fluent, just walk in and speak and have a normal conversation using different sounds, a completely different system. And also English sounds are kind of "sexy". For example, German does not sound attractive to me, everything is "hard" and "cold" - but English is fluid, pleasant.

P08KA

QUESTION 2

Normally - yes. By their clothes/style - these are not clothes from the popular British chains - more bright colours, more experimentation. On the other end of the spectrum - guys in tracksuits with a plastic bag. It also depends on the person's environment - for example university students have their own particular style.

Also by the fact that we directly look at people's faces - the English may perceive this as rude, a little aggressive... Maybe because we are migrants - we want to learn, we look around nervously. It's similar to when English people are on digs - we have lots of energy. The Irish are similar to us. Maybe this habit of looking into people's eyes is due to our limited knowledge of English - we want to understand what people are saying so we watch their faces to be able to understand them better.

QUESTION 3

50/50. I don't regard myself as a typical Polish woman, but I do share some of those characteristics. Sometimes people say "oh, you're Polish" before even I have said anything... I think this is because of the way I dress - I think we tend to dress in a similar way to Germans... Maybe my body build - short legs [laughs] - I think Polish women tend to have shorter legs and thicker thighs... This may be rubbish, but... I don't know.

QUESTION 4

There are so many of us that it is hard to make comparisons to other migrant groups - we speak English better than Asians, probably because we are also European, so it's easier for us to integrate. Also cultural differences - e.g. women are free to go out on their own. And most people seem to want [to speak English] - but because Polish is so different from English, sometimes it is hard to mentally switch to English. And because there are so many of us, it is possible for us to remain within Polish communities, so some Poles may not have the motivation to learn. This could be due to the fact that some of the jobs available to us are simple, low-paid jobs, which don't involve a lot of English - you don't really need a good knowledge of English or education to be able to do it. Some of those [uneducated] Poles find it hard to even speak Polish...

QUESTION 5

I try as hard as I can... People don't really comment in any way. I may have doubts about the use of idioms etc. but I don't have any problems e.g. at work. But obviously, I have an accent - I know that myself. I don't even try to get rid of it or practise [an English accent]. It depends on the day, but I am not normally recognised as Eastern European- I have been told I have a "sweet" accent, perhaps because I also speak German and Italian, so my muscles work differently [than in most Polish people]. When I speak, there is this gentle "whistling" effect - this is due to my natural clench... My accent is not typically "hard" as in most Poles - e.g. "doing" [mimics a typical Polish accent - pronounces with a strongly /k/ at the end] - I don't do that, I soften word endings [mimics "soft" noises]. I have only been recognised as Eastern European twice... But normally people don't know. My accent also changes depending on how tired I am or how I wake up feeling... Sometimes I wake up feeling more German, Italian, Polish... and sometimes English.

QUESTION 6

In Poland I listened to cassettes to prepare for my A-levels and to songs, obviously. When I came over, I started listening to BBC Radio. I would also watch East Enders in order to be able to understand "regular" English people... but this accent irritates me - it sounds aggressive to me. This is to do with my personality - I don't like aggressive accents. Also Polish people may have aggressive accents (especially when they say the K-word), but others have sweeter accents... But I do like the typical BBC accent.

Also preparing for exams (IELTS) may have had an impact - I used to take IELTS every two years to check my level of English, since I wanted to be able to study in the UK.

P09BM1

QUESTION 2

Yes - in most cases; by gestures, behaviour - Polish people here can dress quite well, be well-groomed, even when they just to go shopping, they want to look good, to make a cool impression... We won't go shopping wearing old tracksuit bottoms, slippers and a dressing gown, which happens to the English or the Irish...

Once I've heard someone - I can tell by their accent (a bit) - maybe because it's similar to mine: they sound "harder", not "soft"; the way we stress words is different. Some Polish people repeat their mistakes, use Polish-English... [then, as if talking about himself] We, immigrants, were born and raised in a different world and we all much as hard as we can... but we also get tired and need some downtime - to watch a film or talk to someone in Polish... [BUT] You can download Google Translate and find out how to pronounce words nicely, but if you've heard someone repeat their own mistakes, you "get infected"... My English deteriorates after an hour if I have been spending time with such people. Some people use English words but Polish endings in Polish, e.g. "jumpują" instead of "skaczą" ["they jump"]... Some of them mix like five tenses in one sentence... And the most important thing - those people seem not to care about how they speak - they only want to be able to communicate, they don't want to integrate... I can understand it a bit, with Brexit and all, but not all of us have had negative experiences - you need to open up your mind, and things get easier then...

QUESTION 3

When I came over, my English sounded more American English, because I have always been interested in music [listened to many American bands]. People hardly ever think I'm Polish - I think my looks (blond hair, blue eyes, a ginger beard) play a big role here... I have been taken for someone from one of the Scandinavian countries or Germany (once). When my English was better and I would chat people up and speak English fluently, they knew I wasn't not from the UK, but they had to guess where I was from.

QUESTION 4

I have been told by some English people that they can hear that I am making an effort. Sometimes when sharing a cigarette [with an English colleague] I have been told that the less

stressed I am, the more they like it - the better I sound - sometimes I even get a bit of an English accent... that I don't sound like other {Polish} people... But I am a more open-minded person... I don't have any problems switching from a conversation to Polish to a conversation in English... Or to interpret between a Pole and an English person... both at work but also socially. At times i have noticed some sort of awkwardness, when some people were feeling excluded - I don't like that - when you are in a group, but some people are excluded. I have always noticed that and I would try to involve people in the conversation.

QUESTION 5

I have met a few [Polish] people with great English, but these are the people who work in hospitals, schools, universities. Daily contact with people really helps - my work is different: whether I have conversations in English is not important for my employer. Most Polish people I know don't really want to integrate - they only want to get by in English - they celebrate Polish traditions, holidays, go to Polish shops, go to Polish church as they want to hear the Polish language, which they miss - I do too, sometimes - which is when I listen to Polish music only.

QUESTION 6

I think my main motivation was shame - when I came over, I felt ashamed butchering English to such a degree that I gave up Polish TV, Polish films, etc. I still enjoy watching movies in the original language [English] - no subtitles or voiceover - I like to hear the actors' original voices. I wanted to integrate, I wanted to meet those people, I really opened up to those people - even my ex girlfriends had different nationalities. I would recommend dating and opening up to someone in English - it really helped me [to improve my English]. I really wanted to communicate, and where there's a will, there's a way - we are not so different after all - we're all human.

AFTER THE RECORDING, on the way out of the building: P09 repeatedly emphasised his willingness to integrate and the effort he had put into learning English. He also mentioned how disappointed he felt when an English colleague he trusted told him "England will never be your home". He also mentioned that he didn't mind being called by the English version of his name (by his colleagues), as he regarded that as a sign of respect and acceptance. He said that he preferred that to "always being Marczak" (not real name) [he pronounced his own

surname with an hyper-articulated, trilled /r/] as if he his Polish surname, especially the /r/ in it, signified his foreign-ness/not belonging in the UK.

P10KS

QUESTION 2

Yes - in 90% of cases - by the looks (we look similar to each other - facial features) and by the accent - instantly - especially those who don't have a well-rehearsed English accent. But there are some people who spend a lot of time on it [working on their accent] so you may not be able to tell. We cannot "soften" words in English - the way we pronounce word endings sounds "hard". For example "sixth" (pronounces the <th> as /t/). Sometimes I am not sure - when someone has a Polish name but does not have a strong accent.

QUESTION 3

Usually I am not recognised as Polish. When I speak English people take me for a French or Spanish person. I was once at a party with my manager and people thought I was his partner and thought I was English. I don't know why - I don't have a good English accent, but perhaps it's different from other Pole's accents... Perhaps this is due to my appearance (dark curly hair, darker complexion) - when I was in holiday in a Spanish-speaking country a stranger addressed me in Spanish... I am different! [laughs].

QUESTION 4

We don't speak English very well - we don't try enough. Many people "use" their friends to translate or speak for them in situations where they should be able to communicate themselves. That has happened to me a few times - this is laziness. The biggest problem is that many Poles only work with other peoples and are not exposed to English, so they don't learn. When I started work, it was the same for me. It wasn't until I started working for the university that this changed.

QUESTION 5

I hardly ever get any comments - at the very beginning my manager checked my emails and pointed out some mistakes, but I haven't had either positive or negative feedback really.

QUESTION 6

I did have English in the primary school, but it wasn't very effective. After that I never actually deliberately learnt English - I'm not the kind of person to spend time memorising

stuff from books. It kind of just happened. My manager would send me on different work-related courses, so I picked up a lot of new words there.

P11BM2

QUESTION 2

Yes, always. By appearance - hairstyle (shaved head), tracksuit. Also by the [Polish] swearwords they use. Polish women are more difficult to tell apart.

QUESTION 3

No. I have been taken for a Swede or Norwegian - perhaps due to my [blonde/reddish] hair colour. Sometimes they ask where I am from, but they do not identify me as Polish - they need to guess. I try not to act like a stereotypical Pole, ostentatiously drinking alcohol in public, drinking a lot of alcohol and swearing a lot. Very often Polish men are associated with the K-word ["kurwa"]. Everyone at work now swears in Polish - regardless of where they are from - all the 16-17 nationalities, including people from Africa or Asia - they all swear in Polish now. No idea how that happened. But I think they are fascinated by the "power" of those words - Polish swearwords even sound aggressive because of the "heavy" /r/. For example, German sounds hard when you listen to it because they stress /r/ a lot [too].

QUESTION 4

I have met people at all levels of proficiency in English. At work it depends - but most people can speak English. Perhaps without the [English] accent, but they know enough words - they can communicate effectively. I can hear that they don't pronounce words correctly - there is always a letter missing - for example "again" [pronounces with a heavy Polish accent, then tells an anecdote about a Polish colleague with a really heavy accent who couldn't activate a device using speech recognition technology due to his heavy accent/lack of knowledge of English pronunciation - "say again location" [sɛɪ 'ɛɡən lə'keɪʃən]].

QUESTION 5

I don't know. At work I have a few English colleagues I stick with - I talk to different nationalities a lot, but nobody ever criticised me or praised my English.

QUESTION 6

There is no single person. I had English at school but I didn't try very hard. When I came here I was ashamed of the fact that I could not communicate - I didn't want to be a typical

Pole. After I came here I learnt to listen to them [NSs]. All that English we had learnt at school - it was nothing like the real thing.

P12NT

QUESTION 2

Depends on what part of London I'm in. In some parts the chances of meeting another Pole is really high. So it depends where I am - I can certainly do it here [where he lives]. I can often tell Poles apart by their appearance by their white socks, tracksuits, trainers and the way they act - "have you got a problem?" [cocky]. Once I've heard them speak, I can tell by their accent - e.g. "Hello, can I buy this water, please" [pronounces with a Polish accent and a tapped /r/]. Actually, usually there is no "please"... I back out when I see people like that - we don't want to have anything to do with them.

/r/ is extremely characteristic [produces an exaggerated, very long trilled /r/]. Intonation is different- the whole accent. Also word stress is different - different parts of word are stressed. The way Poles speak English sound "square".

QUESTION 3

No - neither by my appearance nor by the way I speak. They think I'm Dutch, French or German, since I don't have a round red face [half-joking]. We mostly speak English [referring to his wife and himself] - if we hear someone speak Polish e.g. on a bus, we tend to switch to English. We don't really want to be associated with those types I want to avoid... Even though we live in the most Polish part of London - we only live here because accommodation is cheap.

QUESTION 4

It depends how much they want to assimilate and how much they care about their English being as good as possible. I have one friend here whose English is as it should be - she studied at the English department. Another friend who is an interpreter is obsessed with English - she corrects anyone who makes a mistake. But some people feel blocked - they only learn English at school, but are afraid to speak it. Some people, are sort of careless about English - e.g. my manager: he uses fancy words, but he sounds kind of "crude" - his vocabulary and grammar are impressive, but his accent is not - he uses that bloody /r/ [produces a trill]. His wife is English, but his son doesn't speak English at all.

QUESTION 5

"English is not easy" - I always say. My job (IT service) involves working with different customers, and I am often told I don't sound Polish. When I had my job interview, I was given the option of interviewing in Polish, but I chose English, since this job is in England. When I started working I only spoke English for 2 weeks, even though my manager is Polish. I tend to pick up accent features if I spend a lot of time with someone. I have a NS colleague, so after I have been working with her, my English sounds better for a while.

QUESTION 6

My English teacher in the secondary school was pretty good - her English was good and I liked her approach which was different.

I always tried to speak properly when I was learning the language. I think that any language sounds the way it should, when it sounds the way it should [meaning that learning an accent is an integral part of learning a language].

P13NE

QUESTION 2

Yes, in 99% of cases - but I don't know how. Actually, it's 100% for men, I go by their appearance; women are more tricky, but I can usually tell. Polish men have this horrible, characteristic walk - some men, obviously. Kinda bouncy, and the horrible style - tracksuits, hoodies. They swear a lot. But I can also recognise nicer Poles - don't know how.

QUESTION 3

No. They ask me where my accent is from; they can hear a foreign accent, but they cannot place it. I have been told I don't look Polish. It may depend on how hard I am trying to speak properly.

QUESTION 4

I know very few Poles who can speak English very well - you know, in a beautiful English accent. I have a Polish friend, and also you - you both studied English. I think most Poles here don't really make an effort to speak with a nice English accent. I have another friend who has been here for ten years, and she speaks really well - she knows all the words, grammar, but still sounds "square" 0- she has a Polish accent - for example "are you alright" [mimics her friend and pronounces the phrase with both /r/s realised as a tap).

QUESTION 5

They tell me "You speak English well". That my English is very nice - but I think they are over-exaggerating. I don't think my English is very nice. I think I have a lot of room for improvement. Sometimes I can't form sentences the way I'd like to, sometimes I wish I knew more words...

QUESTION 6

I became motivated when I started working in a restaurant here in the UK. I was initially terrified to speak English... but I had to speak - people talked to me and I couldn't just keep quiet. But I have worked with mostly English people since the beginning. Now I am working with a few other non-Brits, so I think my English sounded nicer when I was working in that restaurant.

P14JM

QUESTION 2

Sometimes I do – sometimes only once they've started speaking, sometimes I can tell by the person's appearance or style. However, this can be extremely misleading, so I try not to go by stereotypes. Generally, men are easier to tell apart than women (unless they have the stereotypical cropped hair, trainers, tracksuit); these people can be recognised as "Eastern European" rather than specifically "Polish".

If a Polish person is talking to me in English I can usually recognise them as Polish by their accent; the Polish accent is definitely different than Russian or Czech accents, so I can tell them apart by how soft or hard their accent is. Russians and Ukrainians have softer accents, softer consonants in English than Polish people, who have "harder" accents. How they build their sentences. Also, they pay little attention to native pronunciation, which is something which one needs to practise. But I also have Polish friends who do not sound Polish at all...I think it depends on how much effort you put into to adjust your accent, to learnt the English accent.

QUESTION 3

In the first year, when my accent was still hard, I was recognised as Eastern European, but as my accent kept developing, nobody would recognise as Polish or Serbian - they thought I was German, Dutch, Austrian, American, Australian.

QUESTION 4

My sweeping generalisation is that those people who want to live here, they will make an effort not just to learn lexis and syntax but they will also make sure to work on their pronunciation. The more important pronunciation is for your job (e.g. teaching), the more you pay attention to how correct it is. But this varies across different sectors/jobs, but some jobs require really good pronunciation.

QUESTION 5

Not anymore. At the beginning, when I wanted to practise my pronunciation, I would get compliments (that my vocabulary range was really impressive, but that I needed to improve my accent a bit). Now I don't really get any comments anymore.

QUESTION 6

In my primary school, a teacher who I had private lessons with - she motivated me. I was about to change schools and join a class where students had already been learning English for a while, so I had to catch up in about 6 months. I was able to do it relatively quickly.

Also travelling abroad - English was often the default medium of communication. I think the main factor was communication with a large number of people. Also music - in the primary school I would sing along to songs, reading the lyrics.

P15RK

QUESTION 2

Usually - yes. Perhaps because of our looks... but I really am not able to say how I do it... Although I did get it wrong once.

Sometimes it is because of our accent - we have a fairly characteristic accent, although not all of us- some people speak with a really nice, "pure" English accent. Not sure why - perhaps they've been here for a while, or perhaps it's their superpower - I cannot do that, for example. There are "hard sounds" - such as /r/ - most people say /r/ [produces a Polish tap].

Also when they introduce themselves - most people will use the Polish version of their name ("Łukasz" not "Lukas").

QUESTION 3

No - they usually think I'm French. They say it's because of my accent - although I tell them "I have no French accent in English". Once, on the phone at work, I was mistaken for a Chinese person. I am the only foreign woman in my office, so sometimes patients who couldn't catch my name say they want to speak to "that lady with an accent". But I have also been taken for an Italian or Spanish. However, when I spoke English in Greece I was taken for a NS of British English.

QUESTION 4

Polish people learn English quickly, but it depends on our motivation and the reasons that drove us here... But those who have made the decision to stay here, not just make some money and leave, learn the language quickly. Those who are here only for the money may have no need to improve their English.

QUESTION 5

I have never received any truly negative feedback - most people who correct me do it because they want to help. Only once, an unpleasant patient who wanted to get an early appointment, which I was not able to do, kept telling me "you don't understand me, because English is not your first language". But this only happened once. But I do forget English when I am really stressed.

QUESTION 6

There is no single person who would inspire me. I was kind of forced to come to the UK, as my husband got a job in the UK. Initially the contract was supposed to last for a year, but it got extended, so I decided to join my husband here. I became motivated to learn English only after had I come over.

P16MK

Q,2

I guess so - not sure what this is, but I guess it's the accent. We speak really fast, so pacing; also the way we choose words - we translate from Polish a bit... but also appearance, clothes... but it's hard to describe.

Also, the way we speak, we come across as more enthusiastic, less reserved.

By accent I mean a "hard" accent - all those /v/, <sz> sounds... It's heavier, harder to pronounce. We tend to enunciate in a more deliberate way, while those words should be more "fluid". For example, for me it's hard to pronounce words like "available" or "antibiotic" - words which are similar to Polish confuse me. I couldn't say "hierarchy" correctly - I would pronounce it the Polish way [pronounces the word with a strong Polish accent] - even if someone said it, I was not even able to mimic it.

QUESTION 3

50/50 - more so right after I came over. I have been taken for a French person, more often I am recognised as Slavic/Central/Eastern European, but not necessarily Polish. However, when I was in Ireland, I was told that I had an English accent. I never thought I had any kind of accent - if so, then a non-native accent, not an English accent.

QUESTION 4

Quite poorly - but I don't have many Polish friends and I am not really a part of a Polish community so I don't really know. But I think there are many Poles who arrive here not knowing English and then complain. But to me it's clear that if you cannot speak the language, you can't function in this country, you can't communicate and your life is different - your status decreases. But if someone is more ambitious and wants to live here [they care more about English]. But this is a minority.

In my other job [as a mental health practitioner] I have had patients who don't speak English but want a translator, as they are too embarrassed, suspicious and proud.

QUESTION 5

Sometimes older people who may not know many migrants will be a bit surprised or ask me strange questions - but I don't take it personally or even as something negative. I myself think that my English is good enough - I feel like I don't speak it as well as I should. I ask my English friends to correct me. I sometimes get complimented on my English from English people, but I think they are trying to be nice... I think my studies here gave me a lot of confidence - I don't translate from Polish in my head anymore.

QUESTION 6

I have had a few mentors in the UK. A British friend I worked with gave me lots of support; also a Polish friend motivated me - she even marked my essays. Then a psychologist who used to be an English teacher - she proofread my writing too. She was South African and was my "guru". And then an older English lady who sort of took me under her wing, a bit like a mother - she talked to me a lot and helped me with my dissertation. She gave me a lot of her time. After I came over I went to a language school and I also had private lessons with an English tutor - we worked on my pronunciation, syntax, etc. I would read out and he would teach me pronunciation.

P17SP

QUESTION 2

It used to be easy - now it's not. Polish people now have better accents and speak better English, so that the giveaway clues are harder to find. Also their behaviour (more reserved, withdrawn; but those who have been here for a while tend to be the opposite) and Slavic looks are giveaways.

Polish accent is "hard": how we pronounce /r/ - it's not as hard as in Russian (theirs sounds even harder), but our accent is still sounds "hard" - although this is changing. Also grammatical mistakes (do/does, was/were) are a clue.

QUESTION 3

No, they usually ask if I'm from Germany, France or Portugal. I have been told that I don't look Polish.

QUESTION 4

Polish people don't learn English as they don't need to take tests to live here (unlike Asians), so this is what they lose out on. We often live within Polish communities and stick to them. However, some people assimilate really well, have NS friends, and their English is great.

QUESTION 5

I have never been told that my English is poor; I often hear my English is good, which is encouraging and nice. I often get asked about my accent - where is it from? I still don't use English enough...

QUESTION 6

Initially I felt unable to express my feelings, thoughts, the way I wanted to, which is why I felt kind of "blocked". I still feel that to a point, but not nearly as much. I try to keep developing and learning - I want to start writing essays [to improve my writing skills]

P18SB

QUESTION 2

Yes and no - our accent gives us away; the way we looks (fair complexion, blonde hair) makes us stand out; however, sometimes I got it wrong, and they were from Lithuania or Latvia - they don't have such a strong Russian accent (unlike Ukrainians); I often ask people where they are from. But accent is the main giveaway: we have a "hard/" accent, e.g. <th> pronounced as "guttural" /dem/. Also swearwords - the K-word for example.

QUESTION 3

Generally - no. Initially I was taken for a Greek or an Italian. I have been told that my pronunciation is not very "hard", which perhaps is why I was not recognised as a Pole. My accent is not very hard.

When visiting Israel, I was told I was told I had a British accent. Perhaps tourists recognise other tourists... and since I have lived in the UK for a while now, it is possible that the British accent has rubbed off on my accent somehow... But this is still not a "proper" British accent; I believe I have a Polish accent; I don't pronounce words the way my child does [mimics "computer" with a slightly diphthongised GOOSE vowel, as often pronounced by SSBE Ss] - I say "computer" (pronounces the word with a shorter vowel).

QUESTION 4

Many people arrive in the US or the UK and find it really difficult to speak in English - I was "blocked" the same way.

QUESTION 5

I don't really pay attention to this anymore. My social networks are mostly Polish. English people are really nice, they sometimes compliment me on my English, which is really nice. I don't really work on my language skills anymore - except perhaps with my son, who now is in year 1, so is learning to spell. I make many mistakes as I am not working on my English the way I used to, but there are other priorities now. But this is helping me too - although I don't pronounce e.g. <they> the way NS pronounce it [pronounces a perfect /ð/]... I am trying...but... Here people recognise you as Eastern European when they hear your accent.

QUESTION 6

In my secondary school, on a trip, we met international students. I found it really hard to communicate with them and that feeling had stuck with me. I wanted to communicate with people without any major obstacles and I think I have accomplished my goal. [Goes on to describe her trip to the USA.]

P19MI

QUESTION 2

I mostly do - by appearance (Slavic facial features, clothes - Polish people's clothes match the weather, i.e. warm clothes in cold weather) and by accent (pronunciation - e.g. foreigners use full sentences, they do not contract), gestures.

QUESTION 3

I am recognised as Polish, but mostly in a face to face situation; This could be due to my appearance (blue eyes, blonde hair). But on the phone at work, people often confuse me with my French colleague.

QUESTION 4

There is a lot of variation. For example, my brother works with English people and has tried very hard, has been really motivated, but still struggles with writing/spelling (more than with speaking).

Many people speak English well, but they are shy/embarrassed to speak English, especially when they are both British and Polish people around. I'm sure those people would have no issue communication in English e.g. in a shop. But the presence of other Poles makes us too embarrassed to speak English.

QUESTION 5

Now I don't really get any feedback, but the beginnings weren't easy. Sometimes I would get some negative comments (e.g. from a now-retire colleague when I did not comprehend the name of the caller's company). Another Polish colleague was not happy about another person from Poland joining the company.

QUESTION 6

I never dreamt about leaving Poland/coming to the UK- when I came over I had no English at all. When I started working in a canteen, I had to use a dictionary - I wrote down all the words I would need and I was determined to learn. I asked my colleague to help me apply for a language course. I went to that school for 3 years.

P20JL

QUESTION 2

I try not to judge people on their appearance, but once I have heard them speak, I can usually recognise Polish people. Sometimes their English is so good I cannot recognise them. Polish people, especially women, seem to care about their appearance more - they tend to be well-groomed (with exceptions).

Also by accent - how they pronounce some words. It is relatively easy to recognise someone who has just arrived from Poland.

QUESTION 3

I probably have an accent, even though I have been taken for someone from France. I am hardly ever recognised as someone from Poland.

QUESTION 4

We often pay a lot of attention to speaking in a grammatically correct way; initially I wanted to speak that way too. The locals shorten words and use slang. How Polish people speak English depends on their motivation - those who only want to make some money and go back to Poland don't care in my opinion.

QUESTION 5

I have received compliments usually from older Brits; younger Brits sometimes seem to be jealous of the fact that I can speak 2 languages; they listen out for my mistakes and sometimes make fun of it; perhaps not everyone, but it has happened to me in my workplace, both the current one and the previous one. A colleague laughed at me in the presence of another colleague. My English is far from perfect and it will always be so.

QUESTION 6

Attended private English lessons in the primary school. In the secondary school I had English classes - at which stage I already knew some English, while my classmates didn't. When I was considering uni options I decided to go to a college [Teacher Training College - English] - I wanted to study something I could feel good about. Initially I had problems with listening and speaking, but those difficulties motivated me even further.

I used to record English-language radio programmes (probably some American station) and listen to them in bed, even in my sleep. I also studied grammar on my own - from a really advanced book.

P21KP

QUESTION 2

If this person has a strong Polish or East European accent [it is easy to recognise them as foreign]; also by appearance, no smile, by their eyes, which seem to express some kind of mistrust.

By accent I mean how they pronounce /r/, also spelling pronunciation - ['kɒvər] " instead of /'kʌvə/ <cover>; the "melody" of language [probably means intonation] - e.g. how we ask questions is different.

QUESTION 3

I used to be recognised as Polish, especially for the first 6 months in the UK; however, even then it was rare. I have often been taken for a Dutch person or someone from Scandinavia. In my first job since the very beginning, I asked my regular customers to correct my mistakes or ask them about pronunciation or grammar. It has always been important for me to keep developing in that area [language]. Foreigners are often surprised to find out I am not British.

QUESTION 4

Either very well or extremely poorly. There is some middle ground, but not that much. Compared to other nations, we do pretty well. If one doesn't limit themselves to Polish social networks, it is possible to make progress.

QUESTION 5

The only negative feedback I got from NNS I couldn't understand on the phone at work. I got complimented on my language skills,

QUESTION 6

I like doing things well - I keep working on my language skills; I listen to stuff in English, I actively seek out social situations where I can speak English. I still feel like my English is not good enough.

In the secondary school I learnt English at a very advanced level (English-language focus). This is when it hit me - it's a great feeling to be able to speak a foreign language fluently, without having to stop to think. At uni I read a lot in English, but I found it hard to speak the

language. During my studies I went to England a few times, but I was too anxious to speak. But before moving to the UK I made a conscious decision not to give in to this fear of speaking.

P22SJ

QUESTION 2

Sometimes it is possible to tell [if someone is from Poland] even if they speak English; one can tell by their accent, appearance, looks... But sometimes it is not possible. Usually men can be recognised more easily by their language - even if they speak English, they swear.

When Polish people speak English, it is easier to understand than native English: we separate words, we emphasise /r/s more than the English [produces a tapped /r/].

QUESTION 3

Usually - yes; I have been told I have typically Polish looks.

QUESTION 4

We can speak English well, but also in an "ugly" way - as if not respecting this language, the attitude they have is "OK, I can speak English, but THEY can also learn to speak Polish". For some people, like me, it is hard to learn English, probably because I work with other Polish people a lot.

QUESTION 5

My vocabulary range is poor - "I am embarrassed to speak English in front of my Polish friends, but when I am actually having a conversation I [have more confidence]".

QUESTION 6

I arrived knowing no English - I studied ESOL for 2 years; then I had to quit because of my work schedule, then went back to learn English for a year. Now I am learning again - I'd like to improve my English for the sake of my current job and to be able to get a higher position.

P23GD

QUESTION 2

Normally I can, I guess. However, these days one can be surprised, especially when it comes to young Polish people who have been here for most of their lives. With those kids, who came here as 10-12 year olds, you cannot detect a foreign accent - they also act more like British people. But when it comes to older people, this is very easy. Facial features are a clue too - we have some characteristic features. When I worked in a shop, I would look at the customers and recognise Polish people... One cannot generalise, but it is usually possible. We also have a particular accent; a stronger, Eastern European accent. Our /r/ is not as soft as the /r/ in English, but it is not as hard as the Russian one" <produces words "are" and "very" with clear trills as an example> "That is one of the tell-tale signs [of being Eastern European], at least for me.

QUESTION 3

I have an accent, which I won't be able to get rid of, I don't know. Most people recognise me as an Eastern-European; but I have been taken for a Scandinavian or a Dutch person. People are usually surprised I am Polish. Recently, I have also been told [in my other job in a local pub, where I work every Friday] that I could pass for an English person, but I don't think my accent is as good so as not to be undistinguishable from native accents - but it is not my priority to change my accent.

QUESTION 4

It's hard to say - some people have been working here at building sites, warehouses or as cleaners, and they haven't really learnt any language in the time they've been here, probably because they work with other Poles, But others are open-minded, they integrate into this society. They go to schools and keep developing. There are also Polish teenagers, which have excellent English.

QUESTION 5

I haven't had direct comments/feedback; if anyone makes a comment at all, it's usually positive, but it's hard to say if they are being genuine or just nice.

When I arrived, I had experienced different situations. there were people from all the different parts of the UK at work and sometimes they couldn't understand each other. Sometimes I had trouble understanding all the different accents at work, even if they were saying something simple. But things started improving for me with exposure and experience. You also learn the different words you can use to refer to the same thing.

QUESTION 6

In the secondary school, I was in a class with extended English language programme. My secondary school English teacher - very strict, but it worked, and now I remember her fondly. Also my stay in Sweden was good practice for my English - I had to manage on my own; when I arrived in the UK, I felt confident that I would be able to communicate... but it wasn't quite so easy. Communication with NSs is very different from communication with N-NSs... They [NSs] don't speak the way we learn in books - plus they have different dialects, accents... But I wanted to improve, so took language classes for a year.

P24WP

QUESTION 2

I can tell by accent; they are also given away by typically Polish mistakes. I can also tell by appearance, but I can't explain how. I can simply sense it - I'm right in about 80% cases.

QUESTION 3

I have been taken for a citizen of many countries (Georgia, France, Israel, Romania); somebody in Rome even thought I was from Canada; Polish people usually recognise me as Polish, but the English mostly don't.

QUESTION 4

95-99% of Poles are communicative, but I know 2-3 people who have lived here for 20 years and can barely say "good morning". This could be because they work as kitchen staff or cleaners and they don't get any opportunity to talk to NSs. And perhaps if they do get an opportunity, they don't try - perhaps they are embarrassed because they rarely speak English. You need to work with people to be able to learn English - that's the best way to learn to communicate in English.

QUESTION 5

I don't think my English is great... But I don't really get any feedback - I wouldn't even pay attention to it. My wife sometimes corrects me.

QUESTION 6

One of my former [English] employers taught me English for 3 years, - laughed at me, but forced me to speak English to customers on the phone. One of my former managers pushed me to develop - she asked me to teach people how to pack crates and if I wanted to do a managerial course. My main motivation to learn better English was simply my circumstances.

P25SM

QUESTION 2

I call that "Polglish" - we have a hard, Slavic accent. It's this peculiar tone. I can't always get everyone right, but if someone has just arrived from Poland and has this kind of English we learnt at school, it's likely I'd be able to tell they are Polish. I often notice that when I speak to Polish people I use a different tone, a different accent than when I speak to English people. It's like I adjust to the person I speak to.

[about the Polish accent] An English person would say "computer" [produces a non-rhotic realisation with a glottal stop], while a Polish person would say "computer" [mimics a Polish accent, with non-reduced vowels and an approximant for /r/]. Our accent is 'square-like' - with sharp edges, 'hard' sounds. The English accent is more "smooth". You can particularly hear the difference when it comes to hard letters, e.g. a strong /r/ [as an example, produces the word "Roberta" with two clear taps]. Even in "Rob" the initial /r/ is not as hard as in Polish. Our accent is sharper compared to the English one.

Also word endings - Polish people pronounce words until the very end.

QUESTION 3

It depends. People sometimes think I am South African, I have also been identified as French. I think it depends when the person who asks is from. People from the north don't ask you as many questions about where you are from. But I have noticed they have been asking less the longer I am here.

QUESTION 4

Compared to other Eastern/Central Europeans, we're solid. We are quite motivated to learn the language once we're here. The people who arrive in the UK now usually know what they want to achieve and they have some English; before that, it wasn't always the case. but is also depends on your family background, what region you are from, educational background; but the chances are if you are from a city in Poland, you will have a decent level of English, which they will improve further once they are here. Compared to e.g. Romanians who remain in their "diasporas", we learn the language more quickly. This is from my experience of recruiting people. Local people perceive us as ambitious.

QUESTION 5

I am fluent, so they are sometimes surprised how communicative I am. But on the other hand my position requires me to have a good command of syntax and politically-correct vocabulary, so it's usually me checking my British colleagues' emails. Perhaps we are not quite on par [with NSs] in terms of accent, but in terms of syntax or correctness, I know sometimes NSs ask Poles about the spelling of English words - they know the [high] level of education in Poland. I think my Russian accent is better than my English accent. People are impressed by his ability to communicate effectively.

QUESTION 6

My family was a linguistic melting pot when I was 6, I started learning English to communicate with my grandfather" [who was American, and had Alzheimer's, which significantly impeded his ability to communicate in Polish]. I took my Matura in Russian and English, and then [in the UK] learnt Czech because of my Czech partner.

P26NM

QUESTION 2

It's easy - even after I've heard someone say just 3 words. It's natural - there's a common "note", a common "aura" of how we pronounce words - "an accent". It is especially easy if someone has a low level of English - because then they simply speak only with a Polish accent.

an example: "the way Polish people pronounce "Leicester" [lɛɪ'fɛstɚ] or "Edinburgh" ['ɛdɪnbɜrk] is a good test for where someone is from". They sometimes even argue I am wrong and they are right. Sometimes I even try to sneak this word into conversations in order to pick out an accent, as my little test... This is not really about specific words, this is about a way of speaking.

QUESTION 3

Usually they can't decide where I am from, but sometimes get it right. I have been taken for someone from Germany or even France, which I find strange [the latter]. This could be because I am trying to hide my [Polish] accent [laughs] - I just try to speak correctly.

QUESTION 4

It depends on the social circles. Those people who work at building sites and such - their English is non-existent and they have no motivation... Polish people often form ghettos and don't even try to learn English. But there are also Poles who are more open minded and they have good English. It depends on the social circles. Those people who work at building sites and such - their English is non-existent and they have no motivation... Polish people often form ghettos and don't even try to learn English. But there are also Poles who are more open minded and they have good English.

QUESTION 5

They praise my grammar and vocabulary; I also feel my writing is better than speaking. But sometimes my British/Irish friends correct my pronunciation, some more fancy words. Some people correct the way I stress words.

QUESTION 6

My brother in law always told me that English was an important subject, even when I was 5 years old. I always tried my best at school [as far as English was concerned]. When the time came to decide [where to study] it was easy - I thought to myself, why stay in Poland when I can study somewhere else.

I often visited the UK as a child; my father lived in London, so I spent most of my summer holidays here since the age of 5/6 until I was 13, but I hated it at the time, as all my friends were back in Poland and the weather was worse. When I was 12 they asked me where I wanted to go to school and I picked Poland - it's not that I regret it, but I would have chosen differently now - I could have been honing my English accent for some many years...

Appendix IV: Quantitative Data Analysis Results

Section 01 Participant Details

Appendix Table 1a

Participant Details 1

Participant	IELTS LoE	w/o Pron	IELTS Fluency and Coherence Average	IELTS Lexical Resource Average	IELTS Grammatical Range & Accuracy Average	Phonetic Training (Y/N)	EN Use Index	Age	Gender	LoR (months)	Education - Degree (0-4)	Education - Place (PL/UK)
01 PA	6.8		7	7.5	6	0	72	37	0	132	3	0
02 PD	8		8	8.5	7.5	0	71	27	0	109	2	1
03 GM	7.3		7.5	7	7.5	0	90	37	0	120	3	0
04 BK	6.5		6.5	6.5	6.5	0	8	40	1	170	3	0
05 ZH	7.3		7.5	7.5	7	0	78	24	0	62	1	0
06 MP	6.8		7	7	6.5	0	32.3	36	1	156	2	0
07 ZA	9		9	9	9	1	80	35	0	145	4	1
08 KA	7.8		7.5	8	8	0	90	35	0	158	2	1
09 BM1	6.8		7	7.5	6.5	0	2.7	36	1	150	2	0
10 KS	7.3		7.5	7	7.5	0	33.4	37	0	146	1	0
11 BM2	6.5		7	6.5	6	0	60.1	25	1	60	1	0
12 NT	6.7		7	6.5	6.5	0	27.5	31	1	61	3	0
13 NE	7.2		7	7.5	7	0	50	34	0	61	3	0
14 JM	8.5		9	8.5	8.5	0	96	40	1	143	3	0
15 RK	6.8		7	7	6.5	0	80	31	0	64	3	0
16 MK	7.5		8	7.5	7	0	85	36	0	162	3	0
17 SP	6.8		7	7	6.5	0	23.3	33	1	175	0	0
18 SB	7.5		7.5	7.5	7.5	1	36.1	34	0	155	3	1
19 MI	7.2		7.5	7.5	6.5	0	78.3	36	0	221	1	0
20 JL	7.3		7.5	7.5	7.5	1	70.8	35	1	158	1	0
21 KP	7.5		7.5	7.5	7.5	0	39.9	39	0	53	4	0
22 SJ	5.7		5.5	6	5.5	0	54.1	40	0	128	1	0
23 GD	7.3		7	7.5	7.5	0	44.6	35	1	111	2	1
24 WP	6.8		7	7	6.5	0	4.8	39	1	153	0	0
25 SM	8		8.5	8	7.5	0	77.6	37	1	196	1	1
26 NM	7.5		7.5	7.5	7.5	0	72.4	22	1	43	1	0

Appendix Table 2b

Participant Details 2

Participant	Education - Current (Y/N)	Social Grade (1-5)	Formal Instruction in English PL (Y/N)	Age of Onset (of Learning English)	Years of Instruction in English PL <12	Years of Instruction in English PL 13 - 19	Years of Instruction in English PL >19	Formal Instruction in English UK (Y/N)	Length of instruction in English UK (months)	Estimated LoE upon Arrival
01 PA	0	4	1	10	2	6	3	1	36	3
02 PD	0	4	1	9	3	6	0	0	0	5
03 GM	0	4	1	12	0	7	3	0	0	4
04 BK	0	2	1	15	0	0.5	1	1	36	2
05 ZH	1	1	1	10	2	6	0	1	1	3
06 MP	0	3	1	11	1	6	3	0	0	6
07 ZA	0	5	1	13	0	6	4	0	0	5
08 KA	0	4	1	15	0	4	0	1	9	3
09 BM1	0	3	1	13	0	3	3	1	9	2
10 KS	0	4	1	12	0	7	0	1	6	2
11 BM2	0	2	1	13	0	5	0	0	0	3
12 NT	0	4	1	12	0	7	0	0	0	6
13 NE	0	3	1	11	1	6	2	0	0	3
14 JM	0	5	1	11	1	5	2	0	0	7
15 RK	0	4	1	12	0	9	5	1	4	3
16 MK	0	5	1	10	2	6	3	1	7	3
17 SP	0	3	0	19	0	0	0	1	3	2
18 SB	0	4	1	10	2	7	2	1	10	3
19 MI	0	4	0	19	0	0	0	1	3	1
20 JL	1	4	1	11	1	6	1	1	6	5
21 KP	0	5	1	13	1	6	2	0	0	5
22 SJ	0	2	0	30	0	0	0	1	38	1
23 GD	0	4	1	11	1	8	3.5	1	12	5
24 WP	0	3	1	12	0	3	0	1	48	4
25 SM	0	5	1	6	6	6	0	0	0	6
26 NM	1	1	1	5	7	6	0	1	3	6

Appendix Table 3c

Participant Details 3

Participant	Estimated LoE - Current	Estimated Language Use - Overall	Estimated EN Use - to Self	Estimated EN Use - Song Lyrics (%)	Estimated EN Use - News (%)	Estimated EN Use - Entertainment (%)	Estimated EN Use - Social Media (%)	Weeks in PL per Year	Plans to remain in the UK (0-4)
01 PA	6	3	0.3	0.5	0.5	0.5	0.5	6	0
02 PD	7	4	0.4	0	0	0	0.5	2	4
03 GM	5	4	0.2	0.95	0.5	0.95	0.5	6	3
04 BK	3	2	0.05	1	0.5	0	0.4	3	3
05 ZH	3	4	0.7	0.5	0.5	0.75	0.6	1	0
06 MP	7	3	0.5	0.7	0.8	0.8	0.5	3	4
07 ZA	7	4	0.7	0.7	0.9	1	0.9	6	0
08 KA	7	5	0.6	0.7	0.75	0.6	0.9	0	0
09 BM1	3	3	0.7	1	0.4	0.9	0.8	6	3
10 KS	6	3	0.75	0.8	0	0.1	0.9	3	0
11 BM2	4	3	0.5	0.8	0	0.5	0.5	6	0
12 NT	7	2	0	0.67	1	1	0.5	4	3
13 NE	5	3	0.25	0.75	0.2	1	0.25	2	0
14 JM	7	4	0.9	0.8	0.8	0.8	0.8	1	4
15 RK	5	4	0.5	1	0	1	1	4	0
16 MK	7	4	0.85	0.6	1	0.7	0.7	4	4
17 SP	6	2	0.3	0	0.3	0.3	0.7	4	3
18 SB	6	3	0.1	0.1	0.4	0.05	0.2	4	2
19 MI	6	4	0.65	0.8	0.95	0.95	0	3.5	3
20 JL	6	3	0.05	0.5	0.95	0.95	0.95	2	4
21 KP	6	2	0.25	0.75	1	0.5	0.2	4	0
22 SJ	3	2	0.4	0.5	1	0.5	0.3	1	0
23 GD	6	3	0.5	0.8	0.5	0.5	0.6	3	2
24 WP	5	3	0.1	0.5	0.5	0.3	0.5	3	3
25 SM	7	4	0.7	0.85	0.7	0.85	0.85	2.5	3
26 NM	7	4	0.65	1	1	1	0.7	10	4

Section 02 Reliability Ratings

Appendix Table 4

Interrater Reliability

Participant no.	% of data compared	Interrater Reliability %
01 PA	20.3	53.9
02 PD	22.8	68.5
03 GM	23.8	85.6
04 BK	24.1	75.3

05 ZH	18.1	89.6
06 MP	20.3	78.4
07 ZA	20.9	98.5
08 KA	22.5	77.8
09 BM1	21.3	66.2
10 KS	25.6	86.6
11 BM2	22.8	82.2
12 NT	24.4	82.1
13 NE	19.7	90.5
14 MJ	22.8	61.6
15 RK	24.7	83.5
16 MK	22.2	91.6
17 SP	21.9	82.9
18 SB	20.3	90.7
19 MI	20.6	69.6
20 JL	20.9	98.5
21 KP	21.3	94.1
22 SJ	18.8	61.7
23 GD	25	65.1
24 WP	18.1	98.3
25 SM	20	84.4
26 NM	21.6	68.1
TOTAL:	21.7	80.2

Appendix Table 5

Auditory Analysis versus Acoustic Analysis Reliability

Participant no.	% of data compared	Auditory - Acoustic Analysis Reliability %
01 PA	9.4	96.7
02 PD	10.3	97
03 GM	9.7	100
04 BK	9.1	89.6
05 ZH	8.4	92.6
06 MP	10	90.6
07 ZA	9.4	100

08 KA	10	96.9
09 BM1	8.8	85.7
10 KS	9.4	86.7
11 BM2	9.7	90.3
12 NT	9.1	93.1
13 NE	8.8	100
14 MJ	10.6	100
15 RK	9.1	96.5
16 MK	9.7	100
17 SP	9.1	99
18 SB	9.7	96.7
19 MI	9.7	87.1
20 JL	9.4	96.6
21 KP	8.8	100
22 SJ	8.4	92.5
23 GD	8.4	74.1
24 WP	8.8	100
25 SM	9.4	93.3
26 NM	8.8	89.3
Mean	9.3	94

**Section 03 Percentages of Tokens per Participants in Each Category of /r/-
variants in Data Sets**

Appendix Table 6

Percentages of Tokens: AATotal

Participant	% of 1s in AATotal	% of 2s in AATotal	% of 3s in AATotal	% of 4s in AATotal	% of 5s in AATotal
26 NM	66.55	32	1.09	0	0.36
25 SM	64.9	35.1	0	0	0
24 WP	93.56	1.72	0	0	4.72
23 GD	43.46	56.18	0.35	0	0
22 SJ	3.9	52.38	41.56	1.73	0.43
21 KP	11.02	88.58	0	0	0.39
20 JL	97.75	2.25	0	0	0
19 MI	7.55	65.66	26.42	0.38	0
18 SB	69.53	30.47	0	0	0
17 SP	40.66	56.43	2.49	0	0.41
16 MK	13.06	86.19	0.75	0	0
15 RK	10.91	87.27	1.45	0	0.36
14 JM	32.99	67.01	0	0	0
13 NE	24.9	72.37	1.95	0	0.78
12 NT	29.29	70	0.36	0	0.36
11 BM2	15.81	83	0.4	0	0.79
10 KS	34.63	63.6	0.71	0	1.06
09 BM1	48.62	47.43	2.77	0	1.19
08 KA	68.36	31.64	0	0	0
07 ZA	96.28	3.72	0	0	0
06 MP	20.91	70.72	8.37	0	0
05 ZH	15.08	83.33	1.59	0	0
04 BK	16.6	73.44	9.96	0	0
03 GM	50.32	49.68	0	0	0
02 PD	21.59	78.07	0.33	0	0
01 PA	8	84.73	7.27	0	0

Appendix Table 7

Percentages of Tokens: AAWL

Participant	% of 1s	% of 2s	% of 3s	% of 4s	% of 5s	% of Mispr.
01 PA	3.26	91.63	5.12	0	0	4.44
02 PD	14.02	85.51	0.47	0	0	4.89
03 GM	44.7	55.3	0	0	0	3.56
04 BK	3.23	84.95	11.83	0	0	17.33
05 ZH	15.58	82.91	1.51	0	0	11.56
06 MP	8.78	80.98	10.24	0	0	8.89
07 ZA	95.79	4.21	0	0	0	4.89
08 KA	72.22	27.78	0	0	0	4
09 BM1	43.48	51.69	3.38	0	1.45	8
10 KS	16.34	81.19	0.99	0	1.49	10.22
11 BM2	9.45	89.05	0.5	0	1	10.67
12 NT	27.7	71.83	0	0	0.47	5.33
13 NE	9.33	87.56	2.07	0	1.04	14.22
14 JM	29.3	70.7	0	0	0	4.44
15 RK	3.57	94.9	1.53	0	0	12.89
16 MK	5.8	93.24	0.97	0	0	8
17 SP	35.96	61.08	2.46	0	0.49	9.78
18 SB	64.68	35.32	0	0	0	10.67
19 MI	1.46	76.59	21.46	0.49	0	8.89
20 JL	98.12	1.88	0	0	0	5.33
21 KP	9.39	90.14	0	0	0.47	5.33
22 SJ	2.58	45.36	49.48	2.06	0.52	13.78
23 GD	40.85	59.15	0	0	0	5.33
24 WP	92.59	2.12	0	0	5.29	16
25 SM	66.51	33.49	0	0	0	3.11
26 NM	66.04	32.55	0.94	0	0.47	5.78

Appendix Table 8

Percentages of Tokens: AAFS

Participant	% of 1s	% of 2s	% of 3s	% of 4s	% of 5s
01 PA	25.00	60.00	15	0	0
02 PD	40.23	59.77	0	0	0
03 GM	63.16	36.84	0	0	0
04 BK	61.82	34.55	3.64	0	0
05 ZH	13.21	84.91	1.89	0	0
06 MP	63.79	34.48	1.72	0	0
07 ZA	98.18	1.82	0	0	0
08 KA	54.24	45.76	0	0	0
09 BM1	71.74	28.26	0	0	0
10 KS	80.25	19.75	0	0	0
11 BM2	40.38	59.62	0	0	0
12 NT	34.33	64.18	1.49	0	0
13 NE	71.88	26.56	1.56	0	0
14 JM	43.42	56.58	0	0	0
15 RK	29.11	68.35	1.27	0	1.27
16 MK	37.7	62.3	0	0	0
17 SP	65.79	31.58	2.63	0	0
18 SB	87.27	12.73	0	0	0
19 MI	28.33	28.33	43.33	0	0
20 JL	96.3	3.7	0	0	0
21 KP	19.51	80.49	0	0	0
22 SJ	10.81	89.19	0	0	0
23 GD	51.43	47.14	1.43	0	0
24 WP	97.73	0	0	0	2.27
25 SM	60.71	39.29	0	0	0
26 NM	68.25	30.16	1.59	0	0
AAFS	54.41	42.55	2.91	0.00	0.14

Section 04 Style Shifts

Appendix Table 9

Style Shift: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	AAWL R index	1.7042	26	0.37853	0.07424
	AAFS R index	1.4840	26	0.29662	0.05817

Appendix Table 10

Style Shift: Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	AAWL R index & AAFS R index	26	0.763	0.000

Appendix Table 11

Style Shift: Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
Pair		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	AAWL R index - AAFS R index	0.22017	0.24503	0.04805	0.12120	0.31914	4.582	25	0.000

Appendix Table 12

Style Shift: Paired Samples Effect Sizes

			Standardizer ^a	Point Estimate	95% Confidence Interval	
					Lower	Upper
Pair 1	AAWL	Cohen's d	0.24503	0.899	0.435	1.349
	R index - AAFS	Hedges' correction	0.24878	0.885	0.428	1.329
	R index					

Note. The denominator used in estimating the effect sizes. Cohen's d uses the sample standard deviation of the mean difference. Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.

Section 05 Correlation Coefficients for Categories 1-4 In the AATotal Data Set

Appendix Table 13

Correlation Coefficients for Categories 1-4 In the AATotal Data Set

			% of 1s in AATotal	% of 2s in AATotal	% of 3s in AATotal	% of 4s in AATotal
Spearman's rho	% of 1s in AATotal	Correlation Coefficient	1.000	-.766**	-.663**	-.462**
		Sig. (1-tailed)		0.000	0.000	0.009
		N	26	26	26	26
	% of 2s in AATotal	Correlation Coefficient	-.766**	1.000	0.316	-0.099
		Sig. (1-tailed)	0.000		0.058	0.315
		N	26	26	26	26
	% of 3s in AATotal	Correlation Coefficient	-.663**	0.316	1.000	.473**
		Sig. (1-tailed)	0.000	0.058		0.007
		N	26	26	26	26

% of 4s in AA Total	Correlation	-.462**	-0.099	.473**	1.000
	Coefficient				
	Sig. (1-tailed)	0.009	0.315	0.007	
	N	26	26	26	26

Note. ** Correlation is significant at the 0.01 level (1-tailed).

Section 06 Observation Unit: Participants

Appendix Table 14

Observation Unit: Participants - Descriptive Statistics (Dependent Variables)

		Statistic	Std. Error	
AAWL /r/-fullness index	Mean	1.704	0.074	
	95% Confidence Interval for Mean	Lower Bound	1.551	
		Upper Bound	1.857	
	5% Trimmed Mean	1.701		
	Median	1.783		
	Variance	0.143		
	Std. Deviation	0.379		
	Minimum	1.020		
	Maximum	2.510		
	Range	1.490		
	Interquartile Range	0.610		
	Skewness	-0.242	0.456	
	Kurtosis	-0.266	0.887	
	AAFS /r/-fullness index	Mean	1.484	0.058
95% Confidence Interval for Mean		Lower Bound	1.364	
		Upper Bound	1.604	
5% Trimmed Mean		1.477		
Median		1.438		
Variance		0.088		
Std. Deviation		0.297		
Minimum		1.000		
Maximum		2.150		
Range		1.150		
Interquartile Range		0.390		
Skewness	0.271	0.456		
Kurtosis	-0.341	0.887		
AA Total /r/-fullness index	Mean	1.654	0.069	
	95% Confidence Interval for Mean	Lower Bound	1.513	

		Upper Bound	1.795
	5% Trimmed Mean		1.650
	Median		1.690
	Variance		0.122
	Std. Deviation		0.349
	Minimum		1.020
	Maximum		2.410
	Range		1.400
	Interquartile Range		0.530
	Skewness	-0.160	0.456
	Kurtosis	-0.093	0.887
	Mean	33.874	6.242
% of 1s in AAWL		Lower Bound	21.018
	95% Confidence Interval for Mean	Upper Bound	46.730
	5% Trimmed Mean		32.121
	Median		22.018
	Variance		1013.138
	Std. Deviation		31.830
	Minimum		1.460
	Maximum		98.120
	Range		96.660
	Interquartile Range		56.980
	Skewness	0.819	0.456
	Kurtosis	-0.619	0.887
	Mean	61.196	5.853
	% of 2s in AAWL		Lower Bound
95% Confidence Interval for Mean		Upper Bound	73.251
5% Trimmed Mean			62.638
Median			71.264
Variance			890.711
Std. Deviation			29.845
Minimum			1.880
Maximum			94.900
Range			93.020
Interquartile Range			51.160
Skewness		-0.785	0.456
Kurtosis		-0.549	0.887
Mean		4.345	2.045
% of 3s in AAWL			Lower Bound
	95% Confidence Interval for Mean	Upper Bound	8.557
	5% Trimmed Mean		2.437
	Median		0.721

	Variance	108.774	
	Std. Deviation	10.430	
	Minimum	0.000	
	Maximum	49.480	
	Range	49.480	
	Interquartile Range	2.690	
	Skewness	3.683	0.456
	Kurtosis	14.863	0.887
	Mean	0.098	0.081
		Lower Bound	-0.068
	95% Confidence Interval for Mean	Upper Bound	0.264
	5% Trimmed Mean	0.015	
	Median	0.000	
% of 4s in AAWL	Variance	0.170	
	Std. Deviation	0.412	
	Minimum	0.000	
	Maximum	2.060	
	Range	2.060	
	Interquartile Range	0.000	
	Skewness	4.723	0.456
	Kurtosis	22.960	0.887
	Mean	0.488	0.213
		Lower Bound	0.050
	95% Confidence Interval for Mean	Upper Bound	0.925
	5% Trimmed Mean	0.297	
	Median	0.000	
% of 5s in AAWL	Variance	1.174	
	Std. Deviation	1.084	
	Minimum	0.000	
	Maximum	5.290	
	Range	5.290	
	Interquartile Range	0.500	
	Skewness	3.785	0.456
	Kurtosis	16.351	0.887
	Mean	8.359	0.802
		Lower Bound	6.707
	95% Confidence Interval for Mean	Upper Bound	10.011
	5% Trimmed Mean	8.163	
	Median	8.000	
% of mispr in AAWL	Variance	16.719	
	Std. Deviation	4.089	
	Minimum	3.110	
	Maximum	17.330	

	Range	14.220	
	Interquartile Range	6.000	
	Skewness	0.646	0.456
	Kurtosis	-0.607	0.887
% of 1s in AAFS	Mean	54.407	5.067
	95% Confidence Interval for Mean	Lower Bound	43.970
		Upper Bound	64.843
	5% Trimmed Mean	54.372	
	Median	57.476	
	Variance	667.640	
	Std. Deviation	25.839	
	Minimum	10.810	
	Maximum	98.180	
	Range	87.370	
	Interquartile Range	38.750	
	Skewness	0.085	0.456
	Kurtosis	-0.878	0.887
	Mean	42.551	4.891
% of 2s in AAFS	95% Confidence Interval for Mean	Lower Bound	32.478
		Upper Bound	52.624
	5% Trimmed Mean	42.356	
	Median	38.064	
	Variance	621.938	
	Std. Deviation	24.939	
	Minimum	0.000	
	Maximum	89.190	
	Range	89.190	
	Interquartile Range	32.740	
	Skewness	0.082	0.456
	Kurtosis	-0.674	0.887
	Mean	2.906	1.719
	% of 3s in AAFS	95% Confidence Interval for Mean	Lower Bound
Upper Bound			6.446
5% Trimmed Mean		1.184	
Median		0.000	
Variance		76.831	
Std. Deviation		8.765	
Minimum		0.000	
Maximum		43.330	
Range		43.330	
Interquartile Range		1.620	
Skewness		4.341	0.456
Kurtosis		19.817	0.887

	Mean		0.000	0.000
		Lower Bound	0.000	
	95% Confidence Interval for Mean	Upper Bound	0.000	
	5% Trimmed Mean		0.000	
	Median		0.000	
% of 4s in AAFS	Variance		0.000	
	Std. Deviation		0.000	
	Minimum		0.000	
	Maximum		0.000	
	Range		0.000	
	Interquartile Range		0.000	
	Skewness			
	Kurtosis			
	Mean		0.136	0.098
		Lower Bound	-0.066	
	95% Confidence Interval for Mean	Upper Bound	0.339	
	5% Trimmed Mean		0.038	
	Median		0.000	
% of 5s in AAFS	Variance		0.251	
	Std. Deviation		0.501	
	Minimum		0.000	
	Maximum		2.270	
	Range		2.270	
	Interquartile Range		0.000	
	Skewness		3.827	0.456
	Kurtosis		14.689	0.887
	Mean		38.702	5.710
		Lower Bound	26.942	
	95% Confidence Interval for Mean	Upper Bound	50.462	
	5% Trimmed Mean		37.327	
	Median		31.138	
% of 1s in AATotal	Variance		847.708	
	Std. Deviation		29.115	
	Minimum		3.900	
	Maximum		97.750	
	Range		93.860	
	Interquartile Range		50.740	
	Skewness		0.787	0.456
	Kurtosis		-0.497	0.887
% of 2s in AATotal	Mean		56.654	5.254
	95% Confidence Interval for Mean	Lower Bound	45.833	

		Upper Bound	67.474	
	5% Trimmed Mean		57.942	
	Median		64.632	
	Variance		717.639	
	Std. Deviation		26.789	
	Minimum		1.720	
	Maximum		88.580	
	Range		86.870	
	Interquartile Range		44.980	
	Skewness		-0.818	0.456
	Kurtosis		-0.245	0.887
	Mean		4.146	1.850
		Lower Bound	0.336	
	95% Confidence Interval for Mean	Upper Bound	7.957	
	5% Trimmed Mean		2.492	
	Median		0.551	
% of 3s in AATotal	Variance		89.001	
	Std. Deviation		9.434	
	Minimum		0.000	
	Maximum		41.560	
	Range		41.560	
	Interquartile Range		2.560	
	Skewness		3.235	0.456
	Kurtosis		10.800	0.887
	Mean		0.081	0.068
		Lower Bound	-0.058	
	95% Confidence Interval for Mean	Upper Bound	0.220	
	5% Trimmed Mean		0.011	
	Median		0.000	
% of 4s in AATotal	Variance		0.119	
	Std. Deviation		0.345	
	Minimum		0.000	
	Maximum		1.730	
	Range		1.730	
	Interquartile Range		0.000	
	Skewness		4.773	0.456
	Kurtosis		23.386	0.887
	Mean		0.418	0.186
		Lower Bound	0.035	
% of 5s in AATotal	95% Confidence Interval for Mean	Upper Bound	0.800	
	5% Trimmed Mean		0.247	
	Median		0.000	

Variance	0.897	
Std. Deviation	0.947	
Minimum	0.000	
Maximum	4.720	
Range	4.720	
Interquartile Range	0.420	
Skewness	4.053	0.456
Kurtosis	18.362	0.887

Appendix Table 15

Observation Unit: Participants - Tests of Normality (Dependent Variables)

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
AAWL /r/-fullness index	0.144	26	0.173	0.957	26	0.343
AAFS /r/-fullness index	0.088	26	.200*	0.974	26	0.738
AAATotal /r/-fullness index	0.096	26	.200*	0.962	26	0.438
% of 1s in AAWL	0.209	26	0.005	0.859	26	0.002
% of 2s in AAWL	0.169	26	0.053	0.883	26	0.007
% of 3s in AAWL	0.344	26	0.000	0.470	26	0.000
% of 4s in AAWL	0.517	26	0.000	0.260	26	0.000
% of 5s in AAWL	0.326	26	0.000	0.495	26	0.000
% of mispr in AAWL	0.198	26	0.010	0.918	26	0.041
% of 1s in AAFS	0.096	26	.200*	0.963	26	0.463
% of 2s in AAFS	0.099	26	.200*	0.968	26	0.576
% of 3s in AAFS	0.397	26	0.000	0.361	26	0.000
% of 4s in AAFS		26			26	
% of 5s in AAFS	0.530	26	0.000	0.304	26	0.000
% of 1s in AAATotal	0.145	26	0.171	0.893	26	0.011
% of 2s in AAATotal	0.141	26	0.198	0.900	26	0.015
% of 3s in AAATotal	0.366	26	0.000	0.495	26	0.000
% of 4s in AAATotal	0.516	26	0.000	0.256	26	0.000

% of 5s in AATotal	0.330	26	0.000	0.471	26	0.000
---------------------------	-------	----	-------	-------	----	-------

Note. *. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Appendix Table 16

Observation Unit: Participants - Descriptive Statistics (Independent Variables)

		Statistic	Std. Error
IELTS LoE w/o Pron	Mean	7.256410256410260	0.132442785334820
	95% Confidence Interval for Mean	Lower Bound	6.983639233979190
		Upper Bound	7.529181278841330
	5% Trimmed Mean	7.243589743589740	
	Median	7.333333333333330	
	Variance	0.456	
	Std. Deviation	0.675328346856828	
	Minimum	5.666666666666670	
	Maximum	9.000000000000000	
	Range	3.333333333333330	
	Interquartile Range	0.666666666666667	
	Skewness	0.387	0.456
	Kurtosis	1.428	0.887
	IELTS LoE w Pron	Mean	7.24038
95% Confidence Interval for Mean		Lower Bound	6.97904

	Upper Bound	7.50173	
	5% Trimmed Mean	7.23451	
	Median	7.25000	
	Variance	0.419	
	Std. Deviation	0.647035	
	Minimum	5.625	
	Maximum	8.875	
	Range	3.250	
	Interquartile Range	0.625	
	Skewness	0.276	0.456
	Kurtosis	1.804	0.887
EN Use Index (Interview)	Mean	56.069241353529100	5.531976658151730
	95% Confidence Interval for Mean	Lower Bound	44.675922153135100
		Upper Bound	67.462560553923100
	5% Trimmed Mean	56.864092349596800	
	Median	65.448991919430200	
	Variance	795.672	
	Std. Deviation	28.207656928655500	
	Minimum	2.746185852981970	
	Maximum	96.000000000000000	
	Range	93.253814147018000	
	Interquartile Range	45.632196910986000	
	Skewness	-0.493	0.456
	Kurtosis	-0.948	0.887
PL Use Index (Interview)	Mean	43.933097774375600	5.531909640740330
	95% Confidence Interval for Mean	Lower Bound	32.539916598924100
		Upper Bound	55.326278949827100
	5% Trimmed Mean	43.138506681408400	
	Median	34.581416743330300	
	Variance	795.653	

	Std. Deviation		28.207315205567000	
	Minimum		4.000000000000000	
	Maximum		97.253814147018000	
	Range		93.253814147018000	
	Interquartile Range		45.632196910986000	
	Skewness	0.493	0.456	
	Kurtosis	-0.948	0.887	
Age	Mean		34.27	
	95% Confidence Interval for Mean	Lower Bound	32.28	
		Upper Bound	36.26	
	5% Trimmed Mean		34.61	
	Median		35.50	
	Variance		24.205	
	Std. Deviation		4.920	
	Minimum		22	
	Maximum		40	
	Range		18	
	Interquartile Range		5	
	Skewness	-1.202	0.456	
	Kurtosis	0.830	0.887	
	LoR (months)	Mean		126.62
		95% Confidence Interval for Mean	Lower Bound	106.95
			Upper Bound	146.28
5% Trimmed Mean			126.21	
Median			144.00	
Variance			2369.846	
Std. Deviation			48.681	
Minimum			43	
Maximum			221	
Range			178	
Interquartile Range			95	
Skewness		-0.299	0.456	
Kurtosis		-0.810	0.887	
Age of Onset (of Learning English)		Mean		12.50
		95% Confidence Interval for Mean	Lower Bound	10.60
			Upper Bound	

		Upper Bound	14.40		
		5% Trimmed Mean	12.07		
		Median	12.00		
		Variance	22.100		
		Std. Deviation	4.701		
		Minimum	5		
		Maximum	30		
		Range	25		
		Interquartile Range	3		
		Skewness	2.136	0.456	
		Kurtosis	7.302	0.887	
		Mean	1.15	0.354	
	Years of instruction PL <12		Lower Bound	0.43	
			95% Confidence Interval for Mean	Upper Bound	1.88
		5% Trimmed Mean	0.91		
		Median	0.50		
		Variance	3.255		
		Std. Deviation	1.804		
		Minimum	0		
		Maximum	7		
		Range	7		
		Interquartile Range	2		
		Skewness	2.231	0.456	
		Kurtosis	5.034	0.887	
		Mean	5.058	0.4902	
Years of instruction PL 13 - 19			Lower Bound	4.048	
		95% Confidence Interval for Mean	Upper Bound	6.067	
		5% Trimmed Mean	5.132		
		Median	6.000		
		Variance	6.247		
		Std. Deviation	2.4993		
		Minimum	0.0		
		Maximum	9.0		
		Range	9.0		
		Interquartile Range	2.5		

Years of instruction PL >19	Skewness		-1.044	0.456	
	Kurtosis		0.272	0.887	
	Mean		1.442	0.3093	
	95% Confidence Interval for Mean	Lower Bound		0.805	
		Upper Bound		2.079	
	5% Trimmed Mean		1.338		
	Median		1.000		
	Variance		2.487		
	Std. Deviation		1.5769		
	Minimum		0.0		
	Maximum		5.0		
	Range		5.0		
	Interquartile Range		3.0		
	Skewness		0.596	0.456	
	Kurtosis		-0.906	0.887	
Length of instruction UK (months)	Mean		8.88	2.734	
	95% Confidence Interval for Mean	Lower Bound		3.25	
		Upper Bound		14.52	
	5% Trimmed Mean		7.33		
	Median		3.00		
	Variance		194.346		
	Std. Deviation		13.941		
	Minimum		0		
	Maximum		48		
	Range		48		
	Interquartile Range		9		
	Skewness		1.858	0.456	
	Kurtosis		2.275	0.887	
	Estimated EN Use - to Self	Mean		0.4462	0.05225
		95% Confidence Interval for Mean	Lower Bound		0.3385
Upper Bound				0.5538	
5% Trimmed Mean			0.4457		
Median			0.5000		
Variance			0.071		

	Std. Deviation		0.26643	
	Minimum		0.00	
	Maximum		0.90	
	Range		0.90	
	Interquartile Range		0.46	
	Skewness		-0.134	
			0.456	
	Kurtosis		-1.142	
			0.887	
Estimated EN Use - Media - Song Lyrics (%)	Mean		0.6642	
			0.05571	
	95% Confidence Interval for Mean	Lower Bound		0.5495
		Upper Bound		0.7790
	5% Trimmed Mean		0.6825	
	Median		0.7250	
	Variance		0.081	
	Std. Deviation		0.28409	
	Minimum		0.00	
	Maximum		1.00	
	Range		1.00	
	Interquartile Range		0.31	
	Skewness		-1.121	
			0.456	
	Kurtosis		0.937	
		0.887		
Estimated EN Use - Media - News (%)	Mean		0.5827	
			0.06872	
	95% Confidence Interval for Mean	Lower Bound		0.4412
		Upper Bound		0.7242
	5% Trimmed Mean		0.5919	
	Median		0.5000	
	Variance		0.123	
	Std. Deviation		0.35041	
	Minimum		0.00	
	Maximum		1.00	
	Range		1.00	
	Interquartile Range		0.58	
	Skewness		-0.367	
			0.456	
	Kurtosis		-1.052	
		0.887		
Estimated EN Use - Media - Entertainment (%)	Mean		0.6346	
			0.06684	
	95% Confidence Interval for Mean	Lower Bound	0.4970	

		Upper Bound	0.7723	
		5% Trimmed Mean	0.6496	
		Median	0.7250	
		Variance	0.116	
		Std. Deviation	0.34081	
		Minimum	0.00	
		Maximum	1.00	
		Range	1.00	
		Interquartile Range	0.50	
		Skewness	-0.628	0.456
		Kurtosis	-0.843	0.887
		Mean	0.5865	0.05148
		95% Confidence Interval for Mean	Lower Bound	0.4805
			Upper Bound	0.6926
		5% Trimmed Mean	0.5942	
		Median	0.5500	
		Variance	0.069	
		Std. Deviation	0.26251	
		Minimum	0.00	
		Maximum	1.00	
		Range	1.00	
		Interquartile Range	0.34	
		Skewness	-0.328	0.456
		Kurtosis	-0.512	0.887
		Mean	3.615	0.4200
		95% Confidence Interval for Mean	Lower Bound	2.750
			Upper Bound	4.480
		5% Trimmed Mean	3.500	
		Median	3.250	
		Variance	4.586	
		Std. Deviation	2.1415	
		Minimum	0.0	
		Maximum	10.0	
		Range	10.0	
		Interquartile Range	2.5	
Estimated EN Use - Media - Social Media (%)				
Weeks in PL per Year (%)				

	Skewness	0.937	0.456
	Kurtosis	1.821	0.887

Appendix Table 17

Observation Unit: Participants - Tests of Normality (Independent Variables)

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
IELTS LoE w/o Pron	0.167	26	0.061	0.952	26	0.260
ILETS LoE w Pron	0.152	26	0.127	0.953	26	0.278
EN Use Index (Interview)	0.200	26	0.009	0.925	26	0.058
PL Use Index (Interview)	0.200	26	0.009	0.925	26	0.058
Age	0.213	26	0.004	0.865	26	0.003
LoR (months)	0.170	26	0.051	0.919	26	0.042
Age of Onset (of Learning English)	0.265	26	0.000	0.788	26	0.000
Years of instruction PL <12	0.265	26	0.000	0.672	26	0.000
Years of instruction PL 13 - 19	0.301	26	0.000	0.832	26	0.001
Years of instruction PL >19	0.281	26	0.000	0.825	26	0.000
Length of instruction UK (months)	0.276	26	0.000	0.664	26	0.000
Estimated EN Use - to Self	0.124	26	.200*	0.949	26	0.215
Estimated EN Use - Media - Song Lyrics (%)	0.166	26	0.063	0.870	26	0.003
Estimated EN Use - Media - News (%)	0.132	26	.200*	0.893	26	0.011

Estimated EN Use - Media - Entertainment (%)	0.148	26	0.149	0.881	26	0.006
Estimated EN Use - Media - Social Media (%)	0.140	26	.200*	0.956	26	0.326
Weeks in PL per Year (%)	0.198	26	0.010	0.922	26	0.051

Note. *. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Appendix Table 18

Observation Unit: Participants - Descriptive Statistics (Independent Variables - Questionnaire)

		Statistic	Std. Error
QMotivationDes	Mean	4.9872	0.22071
	95% Confidence Interval for Mean	Lower Bound	4.5326
		Upper Bound	5.4417
	5% Trimmed Mean	5.0043	
	Median	5.0000	
	Variance	1.266	
	Std. Deviation	1.12539	
	Minimum	2.67	
	Maximum	7.00	
	Range	4.33	
	Interquartile Range	1.75	
	Skewness	-0.295	0.456
	Kurtosis	-0.610	0.887
QMotivationAtt	Mean	5.8333	0.20610
	95% Confidence Interval for Mean	Lower Bound	5.4089
		Upper Bound	6.2578
	5% Trimmed Mean	5.9316	
	Median	6.3333	
	Variance	1.104	
Std. Deviation	1.05093		

	Minimum	2.67	
	Maximum	7.00	
	Range	4.33	
	Interquartile Range	1.33	
	Skewness	-1.489	0.456
	Kurtosis	2.254	0.887
QMotivationInt	Mean	5.5769	0.21208
	95% Confidence Interval for Mean	Lower Bound	5.1401
		Upper Bound	6.0137
	5% Trimmed Mean	5.6040	
	Median	5.8333	
	Variance	1.169	
	Std. Deviation	1.08139	
	Minimum	3.67	
	Maximum	7.00	
	Range	3.33	
	Interquartile Range	1.42	
	Skewness	-0.607	0.456
	Kurtosis	-0.676	0.887
	Mean	5.4658	0.15677
QMotivation	95% Confidence Interval for Mean	Lower Bound	5.1429
		Upper Bound	5.7887
	5% Trimmed Mean	5.4839	
	Median	5.6111	
	Variance	0.639	
	Std. Deviation	0.79939	
	Minimum	3.67	
	Maximum	6.89	
	Range	3.22	
	Interquartile Range	1.03	
	Skewness	-0.532	0.456
	Kurtosis	-0.282	0.887
	Mean	4.4744	0.27248
	QIntegrativenessOrient	95% Confidence Interval for Mean	Lower Bound
Upper Bound			5.0355
5% Trimmed Mean		4.5456	
Median		4.6667	
Variance		1.930	

	Std. Deviation	1.38940	
	Minimum	1.33	
	Maximum	6.33	
	Range	5.00	
	Interquartile Range	1.75	
	Skewness	-0.651	0.456
	Kurtosis	0.248	0.887
	Mean	6.4231	0.12342
QIntegrativenessInt	95% Confidence Interval for Mean	Lower Bound	6.1689
		Upper Bound	6.6773
	5% Trimmed Mean	6.4701	
	Median	6.6667	
	Variance	0.396	
	Std. Deviation	0.62934	
	Minimum	5.00	
	Maximum	7.00	
	Range	2.00	
	Interquartile Range	1.08	
	Skewness	-1.040	0.456
	Kurtosis	0.006	0.887
		Mean	5.1154
QIntegrativenessAttNS	95% Confidence Interval for Mean	Lower Bound	4.6368
		Upper Bound	5.5940
	5% Trimmed Mean	5.1510	
	Median	5.3333	
	Variance	1.404	
	Std. Deviation	1.18488	
	Minimum	2.67	
	Maximum	7.00	
	Range	4.33	
	Interquartile Range	1.75	
	Skewness	-0.627	0.456
	Kurtosis	-0.232	0.887
		Mean	5.7436
QIntegrativenessAttCul	95% Confidence Interval for Mean	Lower Bound	5.3400
		Upper Bound	6.1472
	5% Trimmed Mean	5.8177	
Median	6.0000		

	Variance	0.998	
	Std. Deviation	0.99914	
	Minimum	3.00	
	Maximum	7.00	
	Range	4.00	
	Interquartile Range	1.17	
	Skewness	-1.110	0.456
	Kurtosis	1.140	0.887
QIntegrativeness	Mean	5.4391	0.12689
	95% Confidence Interval for Mean	Lower Bound	5.1778
		Upper Bound	5.7004
	5% Trimmed Mean	5.4615	
	Median	5.5000	
	Variance	0.419	
	Std. Deviation	0.64703	
	Minimum	4.00	
	Maximum	6.42	
	Range	2.42	
	Interquartile Range	1.02	
	Skewness	-0.330	0.456
	Kurtosis	-0.382	0.887
	QInstrumental	Mean	4.2308
95% Confidence Interval for Mean		Lower Bound	3.6701
		Upper Bound	4.7914
5% Trimmed Mean		4.2749	
Median		4.1667	
Variance		1.927	
Std. Deviation		1.38811	
Minimum		1.33	
Maximum		6.33	
Range		5.00	
Interquartile Range		2.42	
Skewness		-0.337	0.456
Kurtosis		-0.739	0.887
QAnxiety		Mean	3.7308
	95% Confidence Interval for Mean	Lower Bound	3.2416
		Upper Bound	4.2200
	5% Trimmed Mean	3.7009	

	Median	3.6667	
	Variance	1.467	
	Std. Deviation	1.21113	
	Minimum	1.67	
	Maximum	6.33	
	Range	4.67	
	Interquartile Range	1.83	
	Skewness	0.396	0.456
	Kurtosis	-0.366	0.887
	Mean	5.0385	0.20617
AttGB	95% Confidence Interval for Mean	Lower Bound	4.6139
		Upper Bound	5.4631
	5% Trimmed Mean	5.0527	
	Median	5.0000	
	Variance	1.105	
	Std. Deviation	1.05125	
	Minimum	2.67	
	Maximum	7.00	
	Range	4.33	
	Interquartile Range	1.42	
	Skewness	-0.007	0.456
	Kurtosis	0.122	0.887
AttGA	Mean	3.6603	0.28110
	95% Confidence Interval for Mean	Lower Bound	3.0813
		Upper Bound	4.2392
	5% Trimmed Mean	3.6923	
	Median	3.6667	
	Variance	2.054	
	Std. Deviation	1.43332	
	Minimum	1.00	
	Maximum	5.67	
	Range	4.67	
	Interquartile Range	2.42	
	Skewness	-0.353	0.456
Kurtosis	-0.974	0.887	

Appendix Table 19

Observation Unit: Participants – Tests of Normality (Independent Variables - Questionnaire)

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
QMotivationDes	0.150	26	0.136	0.969	26	0.589
QMotivationAtt	0.260	26	0.000	0.842	26	0.001
QMotivationInt	0.152	26	0.125	0.908	26	0.023
QMotivation	0.160	26	0.085	0.955	26	0.301
QIntegrativenessOrient	0.113	26	.200*	0.934	26	0.096
QIntegrativenessInt	0.304	26	0.000	0.815	26	0.000
QIntegrativenessAttNS	0.154	26	0.117	0.943	26	0.155
QIntegrativenessAttCul	0.184	26	0.024	0.901	26	0.016
QIntegrativeness	0.097	26	.200*	0.965	26	0.504
QInstrumental	0.133	26	.200*	0.950	26	0.229
QAnxiety	0.136	26	.200*	0.969	26	0.585
AttGB	0.136	26	.200*	0.971	26	0.642
AttGA	0.105	26	.200*	0.944	26	0.164

Note. *. This is a lower bound of the true significance. a. Lilliefors Significance Correction

Appendix Table 20

Observation Unit: Participants – Pearson's Correlation Coefficient I

Pearson's correlation coefficient		AAWL /r/- fullness index	AAFS /r/- fullness index	AATotal /r/- fullness index	% of 1s in AAFS	% of 2s in AAFS
IELTS Fluency and Coherence Average	Pearson Correlation	-.489*	-0.228	-.469*	0.248	-0.238
	Sig. (2-tailed)	0.011	0.262	0.016	0.222	0.243
	N	26	26	26	26	26
IELTS LoE w/o Pron	Pearson Correlation	-.548**	-0.296	-.532**	0.306	-0.276
	Sig. (2-tailed)	0.004	0.142	0.005	0.128	0.172
	N	26	26	26	26	26
IELTS LoE w Pron	Pearson Correlation	-.519**	-0.285	-.507**	0.308	-0.292
	Sig. (2-tailed)	0.007	0.159	0.008	0.126	0.147

	N	26	26	26	26	26
EN Use Index (Interview)	Pearson Correlation	-0.029	0.318	0.029	-0.308	0.271
	Sig. (2-tailed)	0.888	0.113	0.888	0.126	0.180
	N	26	26	26	26	26
PL Use Index (Interview)	Pearson Correlation	0.029	-0.318	-0.029	0.308	-0.271
	Sig. (2-tailed)	0.887	0.113	0.888	0.126	0.180
	N	26	26	26	26	26
Estimated EN Use - to Self	Pearson Correlation	0.093	0.190	0.110	-0.185	0.167
	Sig. (2-tailed)	0.653	0.352	0.594	0.365	0.415
	N	26	26	26	26	26
Estimated EN Use - Media - Social Media (%)	Pearson Correlation	-.484*	-.410*	-.494*	0.310	-0.158
	Sig. (2-tailed)	0.012	0.038	0.010	0.123	0.442
	N	26	26	26	26	26
Weeks in PL per Year (%)	Pearson Correlation	-0.162	-0.140	-0.162	0.184	-0.213
	Sig. (2-tailed)	0.429	0.497	0.428	0.369	0.296
	N	26	26	26	26	26

Note. *. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

Appendix Table 21

Observation Unit: Participants – Pearson's Correlation Coefficient II

		QMotivation	QIntegrativeness	QInstrumental	QAnxiety	AttGB	AttGA
AAWL /r/- fullness index	Pearson Correlation	-0.033	0.036	0.079	.396*	-0.076	-0.035
	Sig. (2-tailed)	0.872	0.860	0.700	0.045	0.713	0.866
	N	26	26	26	26	26	26
AAFS /r/- fullness index	Pearson Correlation	0.093	0.125	0.040	0.178	-0.005	-0.069
	Sig. (2-tailed)	0.652	0.544	0.847	0.385	0.980	0.738
	N	26	26	26	26	26	26

	N	26	26	26	26	26	26
AATotal /r/- fullness index	Pearson Correlation	-0.002	0.048	0.078	0.383	-0.068	-0.038
	Sig. (2-tailed)	0.993	0.814	0.704	0.053	0.740	0.855
	N	26	26	26	26	26	26
% of 1s in AAFS	Pearson Correlation	-0.099	-0.094	-0.007	-0.176	0.011	-0.033
	Sig. (2-tailed)	0.632	0.648	0.971	0.389	0.958	0.872
	N	26	26	26	26	26	26
% of 2s in AAFS	Pearson Correlation	0.106	0.050	-0.012	0.162	-0.011	0.151
	Sig. (2-tailed)	0.605	0.807	0.954	0.430	0.956	0.460
	N	26	26	26	26	26	26

Note. *. Correlation is significant at the 0.05 level (2-tailed).

Appendix Table 22

Observation Unit: Participants – Spearman's Rho I

	A	A	AA	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
	W	AF	Tot	of	of	of	of	of	of	of	of	of	of	of	of	of	of	
	L	S	al	1s	2s	3s	4s	5s	1s	2s	3s	4s	5s	1s	2s	3s	4s	
	/r/-	/r/-	/r/-	in	in	in	in	in	in	in	in	in	in	in	in	in	in	
	ful	ful	full	A	A	A	A	A	A	A	A	A	A	AA	AA	AA	AA	
	lne	lne	nes	A	A	A	A	A	A	A	A	A	A	Tot	Tot	Tot	Tot	
	ss	ss	s	W	W	W	W	W	F	F	F	F	F	al	al	al	al	
	ind	ind	ind	L	L	L	L	L	S	S	S	S	S	al	al	al	al	
	ex	ex	ex															
Spearman's rho	Correlation	-	-	-	.39	-	-	-	0.	-	-	-	-	0.3	-	-	-	
	Sig. (2-tailed)	.40	0.1	0.3	1*	0.2	.40	0.2	.44	12	15	22	24	30	0.1	.45	0.2	.48
	Resource	4*	00	44	06	0*	13	3*	0	0	8	2	0	0	0.3	0.0	0.2	0.0
	Average	0.0	0.6	0.0	0.0	0.3	0.0	0.2	0.0	0.	0.	0.	0.	0.1	0.3	0.0	0.2	0.0
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
Spearman's rho	Correlation	-	-	-	.62	-	-	-	0.	-	-	-	-	.60	-	-	-	
	Sig. (2-tailed)	.63	0.3	.59	1**	0.3	.70	0.3	0.3	36	26	45	23	0**	0.3	.74	0.3	.41
	Resource	6**	87	2**	81	7**	74	52	1	0	*	9	0	0.3	5**	74	1*	
	Average	0.0	0.6	0.0	0.0	0.3	0.0	0.2	0.0	0.	0.	0.	0.	0.1	0.3	0.0	0.2	0.0
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26

& Accuracy Average	Sig.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(2-tailed)	0.00	0.01	0.01	0.01	0.05	0.00	0.00	0.07	0.19	0.02	0.23	0.01	0.00	0.00	0.00	0.00	0.00
	d)																	
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
IELTS LoE w/o Pron	Correlation	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-
	Coef	.51	0.2	.45	.49	0.2	.60	0.2	.43	0.19	.4	0.0	.43	0.2	.66	0.2	.48	.48
	ficie	4**	06	2*	4*	51	4**	90	0*	2	2	*	3	28	7**	90	0*	0*
	Sig.	0.00	0.3	0.00	0.00	0.2	0.00	0.1	0.00	0.34	0.0	0.0	0.0	0.00	0.2	0.00	0.1	0.00
	(2-tailed)	0.07	0.13	0.20	0.10	0.15	0.01	0.51	0.28	0.07	0.09	0.03	0.25	0.27	0.63	0.00	0.51	0.13
	d)																	
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
IELTS LoE w	Correlation	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-
	Coef	.44	0.1	.40	.42	0.2	.55	0.2	.43	0.20	.4	0.0	.39	0.2	.61	0.2	.49	.49
	ficie	7*	94	5*	8*	00	0**	41	8*	4	5	*	1	07	2**	41	0*	0*
	Sig.	0.00	0.3	0.00	0.00	0.3	0.00	0.2	0.00	0.31	0.0	0.0	0.0	0.00	0.3	0.00	0.2	0.00
	(2-tailed)	0.22	0.41	0.40	0.29	0.26	0.04	0.35	0.25	0.09	0.05	0.03	0.13	0.46	0.10	0.01	0.35	0.11
	d)																	
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
EN Use Index (Interview)	Correlation	-	0.0	0.3	0.00	0.00	-	0.0	-	-	0.0	-	-	0.0	0.0	0.2	0.0	-
	Coef	0.0	0.54	0.13	0.33	0.36	0.43	0.2	.58	0.30	0.28	0.15	0.08	0.00	0.74	0.86	0.83	.53
	ficie	54						32	8**	1	2	9	2	74	86	83	90	8**
	Sig.	0.7	0.1	0.8	0.8	0.8	0.2	0.6	0.00	0.13	0.0	0.0	0.0	0.7	0.6	0.1	0.6	0.00
	(2-tailed)	0.94	0.19	0.72	0.62	0.34	0.55	0.61	0.02	0.05	0.02	0.07	0.69	0.21	0.77	0.61	0.61	0.05
	d)																	
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
PL Use Index (Interview)	Correlation	0.0	-	-	-	-	0.2	-	.58	0.0	-	0.0	0.0	-	0.2	-	-	.53
	Coef	0.0	0.3	0.00	0.00	0.00	0.2	0.0	.58	0.30	0.28	0.15	0.08	0.00	0.74	0.86	0.83	.53
	ficie	54	13	33	36	43	32	90	8**	1	2	9	2	74	86	83	90	8**
	Sig.	0.7	0.1	0.8	0.8	0.8	0.2	0.6	0.00	0.13	0.0	0.0	0.0	0.7	0.6	0.1	0.6	0.00
	(2-tailed)	0.94	0.19	0.72	0.62	0.34	0.55	0.61	0.02	0.05	0.02	0.07	0.69	0.21	0.77	0.61	0.61	0.05
	d)																	
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
Age	Correlation	0.1	0.0	0.1	-	-	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-	-	0.2	-
	Coef	0.0	0.16	0.16	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	ficie	67	16	76	71	75	74	68	16	03	03	21	2	21	75	04	68	18
	Sig.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	(2-tailed)	0.07	0.19	0.02	0.07	0.19	0.02	0.07	0.19	0.02	0.07	0.19	0.02	0.07	0.19	0.02	0.07	0.19
	d)																	
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26

	ficie																	
	nt																	
	Sig.																	
	(2-	0.4	0.9	0.3	0.4	0.7	0.7	0.1	0.9	0.	0.	0.	0.	0.5	0.7	0.9	0.1	0.9
	taille	16	39	89	03	14	18	85	39	88	86	29	87	57	14	84	85	30
	d)									5	0	8	7					
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	Corr																	
	elati	-	-	-	0.0	-	0.1	0.1	-	0.	-	0.	-	-	-	0.0	0.1	-
	on	0.0	0.2	0.1	0.0	0.3	0.1	0.1	0.2	0.27	.4	0.03	0.	0.2	0.3	0.0	0.1	0.3
	Coef	91	17	29	90	06	56	81	92	8	10	3	05	00	52	75	81	34
	ficie																	
	nt																	
	Sig.																	
	(2-	0.6	0.2	0.5	0.6	0.1	0.4	0.3	0.1	0.	0.	0.	0.	0.3	0.0	0.7	0.3	0.0
	taille	59	88	30	61	28	45	76	48	17	03	87	80	26	78	17	76	95
	d)									0	7	1	7					
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	Corr																	
	elati	0.2	0.0	0.2	-	-	0.2	.45	0.3	-	-	0.	0.	-	-	0.2	.45	0.3
	on	0.12	0.85	0.08	0.02	0.07	0.76	0.8*	0.10	0.07	0.03	0.06	0.08	0.09	0.68	0.55	0.8*	0.55
	Coef																	
	ficie																	
	nt																	
	Sig.																	
	(2-	0.2	0.6	0.3	0.3	0.7	0.1	0.0	0.1	0.	0.	0.	0.	0.3	0.7	0.2	0.0	0.0
	taille	98	79	09	23	35	72	19	23	73	86	93	77	83	40	08	19	75
	d)									5	6	9	7					
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	Corr																	
	elati	-	0.0	-	0.0	0.1	-	-	-	-	0.	0.	-	0.	0.0	0.1	-	-
	on	0.076	0.92	0.39	0.65	0.05	0.158	0.270	0.355	0.105	0.156	0.00	0.270	0.2149	0.152	0.170	0.29*	
	Coef																	
	ficie																	
	nt																	
	Sig.																	
	(2-	0.7	0.6	0.8	0.7	0.6	0.4	0.1	0.0	0.	0.	0.	0.	0.9	0.4	0.4	0.1	0.0
	taille	12	54	51	51	11	40	83	75	60	44	80	18	20	67	59	83	33
	d)									8	8	7	3					
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	Corr																	
	elati	-	-	-	0.1	0.1	-	-	-	0.	0.	-	0.	0.1	0.1	-	-	-
	on	0.177	0.81	0.68	0.58	0.81	.427*	.461*	0.266	0.055	0.101	0.109	0.074	0.44	0.35	0.362	.461*	0.203
	Coef																	
	ficie																	
	nt																	
	Sig.																	
	(2-	0.3	0.6	0.4	0.4	0.3	0.0	0.0	0.1	0.	0.	0.	0.	0.4	0.5	0.0	0.0	0.3
	taille	86	95	12	42	75	30	18	89	78	62	59	71	84	09	69	18	20
	d)									9	3	6	8					
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	Corr																	
	elati	0.0	-	0.0	-	0.2	-	-	-	0.	-	-	0.	-	0.1	-	-	-
	on	0.68	0.90	0.49	0.68	0.14	0.037	0.285	0.372	0.106	0.002	0.002	0.097	0.016	0.167	0.037	0.285	0.257
	Coef																	
	ficie																	
	nt																	
	Sig.																	
	(2-	0.3	0.6	0.4	0.4	0.3	0.0	0.0	0.1	0.	0.	0.	0.	0.4	0.5	0.0	0.0	0.3
	taille	86	95	12	42	75	30	18	89	78	62	59	71	84	09	69	18	20
	d)									9	3	6	8					
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	Corr																	
	elati	0.0	-	0.0	-	0.2	-	-	-	0.	-	-	0.	-	0.1	-	-	-
	on	0.68	0.90	0.49	0.68	0.14	0.037	0.285	0.372	0.106	0.002	0.002	0.097	0.016	0.167	0.037	0.285	0.257
	Coef																	
	ficie																	
	nt																	
	Sig.																	
	(2-	0.3	0.6	0.4	0.4	0.3	0.0	0.0	0.1	0.	0.	0.	0.	0.4	0.5	0.0	0.0	0.3
	taille	86	95	12	42	75	30	18	89	78	62	59	71	84	09	69	18	20
	d)									9	3	6	8					
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	Corr																	
	elati	0.0	-	0.0	-	0.2	-	-	-	0.	-	-	0.	-	0.1	-	-	-
	on	0.68	0.90	0.49	0.68	0.14	0.037	0.285	0.372	0.106	0.002	0.002	0.097	0.016	0.167	0.037	0.285	0.257
	Coef																	
	ficie																	
	nt																	
	Sig.																	
	(2-	0.3	0.6	0.4	0.4	0.3	0.0	0.0	0.1	0.	0.	0.	0.	0.4	0.5	0.0	0.0	0.3
	taille	86	95	12	42	75	30	18	89	78	62	59	71	84	09	69	18	20
	d)									9	3	6	8					
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	Corr																	
	elati	0.0	-	0.0	-	0.2	-	-	-	0.	-	-	0.	-	0.1	-	-	-
	on	0.68	0.90	0.49	0.68	0.14	0.037	0.285	0.372	0.106	0.002	0.002	0.097	0.016	0.167	0.037	0.285	0.257
	Coef																	
	ficie																	
	nt																	
	Sig.																	
	(2-	0.3	0.6	0.4	0.4	0.3	0.0	0.0	0.1	0.	0.	0.	0.	0.4	0.5	0.0	0.0	0.3
	taille	86	95	12	42	75	30	18	89	78	62	59	71	84	09	69	18	20
	d)									9	3	6	8					
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	Corr																	
	elati	0.0	-	0.0	-	0.2	-	-	-	0.	-	-	0.	-	0.1	-	-	-
	on	0.68	0.90	0.49	0.68	0.14	0.037	0.285	0.372	0.106	0.002	0.002	0.097	0.016	0.167	0.037	0.285	0.257
	Coef																	
	ficie																	
	nt																	
	Sig.																	
	(2-	0.3	0.6	0.4	0.4	0.3	0.0	0.0	0.1	0.	0.	0.	0.	0.4	0.5	0.0	0.0	0.3
	taille	86	95	12	42													

	ction	Coef								4	5								
	PL	ficie																	
	>19	nt																	
		Sig.																	
		(2-	0.7	0.6	0.8	0.7	0.2	0.8	0.1	0.0	0.	0.	0.	0.	0.9	0.4	0.8	0.1	0.2
		taille	41	63	13	42	93	59	58	61	60	90	90	63	38	16	56	58	05
		d)									6	9	5	8					
		N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
		Corr																	
		elati																	
	Length	on	0.0	-	0.0	-	-	0.2	0.2	0.1	0.	-	0.	0.	-	0.2	0.2	0.2	0.1
	h of	Coef	36	48	11	59	89	61	27	01	05	0.	07	28	0.0	0.2	0.2	0.2	0.1
	instru	ficie									0	11	0	6	08	45	64	27	13
	ction	nt									4	0	0	6					
	UK	Sig.																	
	(mont	(2-	0.8	0.8	0.9	0.7	0.3	0.1	0.2	0.6	0.	0.	0.	0.	0.9	0.2	0.1	0.2	0.5
	hs)	taille	62	15	58	74	55	97	64	22	80	58	73	15	69	28	92	64	83
		d)									7	0	5	7					
		N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
		Corr																	
		elati																	
	Estim	on	0.0	0.1	0.0	-	0.0	0.1	0.0	-	-	0.	-	-	-	0.0	0.0	0.0	-
	ated	Coef	11	10	41	0.0	0.0	0.0	0.0	0.0	0.	0.	0.	0.	0.0	0.0	0.0	0.0	0.0
	EN	ficie				01	62	00	53	93	10	08	15	16	84	71	56	53	84
	Use -	nt									5	5	5	2					
	to Self	Sig.																	
		(2-	0.9	0.5	0.8	0.9	0.7	0.6	0.7	0.6	0.	0.	0.	0.	0.6	0.7	0.7	0.7	0.6
		taille	59	94	42	95	63	28	98	51	60	68	44	42	83	29	85	98	83
		d)									8	0	9	9					
		N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
		Corr																	
		elati																	
	Estim	on	0.0	-	0.0	-	0.0	0.0	-	0.0	0.	-	0.	0.	-	0.0	0.0	-	0.1
	ated	Coef	58	0.0	59	0.0	0.0	0.0	0.0	0.0	04	0.	0.	0.	0.0	0.0	0.0	0.0	0.1
	EN	ficie		38		62	85	71	67	39	5	04	04	4	20	56	89	0.0	20
	Use -	nt									9	9	7					67	
	Media	Sig.																	
	- Song	(2-	0.7	0.8	0.7	0.7	0.6	0.7	0.7	0.8	0.	0.	0.	0.	0.9	0.7	0.6	0.7	0.5
	Lyrics	taille	77	55	76	63	80	29	44	48	82	81	81	79	24	85	65	44	60
	(%)	d)									8	1	9	3					
		N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
		Corr																	
		elati																	
	Estim	on	-	0.2	0.0	0.0	-	-	0.3	-	-	0.	0.	-	-	-	-	0.3	-
	ated	Coef	0.0	19	53	33	0.2	0.1	43	0.1	22	17	00	24	0.0	0.1	0.0	0.3	0.2
	EN	ficie	37				88	37	87	6	6	2	2	6	32	48	60	43	75
	Use -	nt																	
	Media	Sig.																	
	- News	(2-	0.8	0.2	0.7	0.8	0.1	0.5	0.0	0.3	0.	0.	0.	0.	0.8	0.4	0.7	0.0	0.1
	(%)	taille	56	82	96	72	53	03	86	60	26	40	99	22	76	71	71	86	75
		d)									8	1	1	5					
		N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	Estim	Corr	-	-	-	0.1	-	-	0.0	-	0.	-	0.	0.	0.1	-	-	0.0	-
	ated	elati	0.1	0.0	0.1	55	0.1	0.0	31	0.0	05	0.	11	03	12	0.1	0.0	31	0.0

EN	on	48	32	26		43	83		94	3	06	6		5		07	18		46	
Use -	Coef										5									
Media	ficie																			
-	nt																			
Enter	Sig.									0.	0.	0.		0.		0.5	0.6	0.9	0.8	0.8
tainm	(2-	0.4	0.8	0.5	0.4	0.4	0.6	0.8	0.6	79	75	57		86		86	05	29	82	22
ent	taile	70	78	39	48	86	86	82	48	7	2	2		6						
(%)	d)																			
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	Corr																			
Estim	elati	-	-	-		-	-	-	-	0.	-	-		0.		-	-	-	-	-
ated	on	.49	0.3	.44	.50	0.2	0.2	.40	0.1	28	0.	0.		16	.43	0.2	0.2	.40	0.0	
EN	Coef	7**	11	3*	2**	68	68	6*	23	8	12	28		3	1*	58	97	6*	46	
Use -	ficie										4	6								
Media	nt																			
-	Sig.									0.	0.	0.		0.		0.0	0.2	0.1	0.0	0.8
Social	(2-	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.5	0.	0.	0.		0.		0.0	0.2	0.1	0.0	0.8
Media	taile	10	22	24	09	85	86	40	48	15	54	15		42	28	04	41	40	23	
(%)	d)									4	7	6		6						
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	Corr																			
	elati	-	-	-	0.0	0.1	0.0	-	0.1	0.	-	0.		0.		0.0	0.0	0.0	-	0.1
Week	on	0.0	0.1	0.0	0.0	0.1	0.0	0.2	0.1	14	0.	0.		02	37	49	59	0.2	0.99	
s in	Coef	34	14	52	38	21	22	03	58	1	13	09		4				03		
PL	ficie									8	9									
per	nt																			
Year	Sig.									0.	0.	0.		0.		0.8	0.8	0.7	0.3	0.3
(%)	(2-	0.8	0.5	0.8	0.8	0.5	0.9	0.3	0.4	49	50	63		90	56	11	74	19	29	
	taile	69	78	02	55	57	16	19	40	3	2	1		6						
	d)																			
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26

Note. *. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

Appendix Table 23

Observation Unit: Participants – Spearman's Rho II

	A A W L / r/ - ful ln es s in de x	A A FS / r/ - ful ln es s in de x	A A To tal / r/ - ful ln es s in de x	% of 1s in A A W L	% of 2s in A A W L	% of 3s in A A W L	% of 4s in A A W L	% of 5s in A A W L	% of mi sp r in A A W L	% of 1s in A A F S	% of 2s in A A F S	% of 3s in A A F S	% of 4s in A A F S	% of 5s in A A F S	% of 1s in A A To tal	% of 2s in A A To tal	% of 3s in A A To tal	% of 4s in A A To tal	% of 5s in A A To tal	
Education - Degree	Correlation	0.17	0.12	0.180	0.177	0.358	0.200	0.289	0.375	0.015	0.024	0.007	0.016	0.024	0.011	0.0349	0.0191	0.0280	0.0322	
	Sig. (2-tailed)	0.406	0.0537	0.0379	0.0388	0.0072	0.0038	0.0066	0.0099	0.0577	0.0317	0.0072	0.0114	0.0112	0.0511	0.0080	0.0050	0.0350	0.0166	0.0109
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	Correlation	0.0214	0.0052	0.0137	0.0180	0.0206	0.043**	0.0150	0.041*	0.049**	0.0037	0.0041	0.017*	0.0067	0.0077	0.0266	0.0171	0.052**	0.0150	0.042*
Spearman's rho	Sig. (2-tailed)	0.293	0.082	0.0506	0.0379	0.0090	0.004	0.043	0.024	0.0059	0.0044	0.004	0.0046	0.0066	0.0404	0.0353	0.002	0.0463	0.037	
	N	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	
	Estimated LoE upon Arrival (Altogether)	0.48*	0.161	0.388*	0.53*	0.220	0.56**	0.47*	0.276	0.57**	0.332	0.330	0.391	0.316	0.0384	0.0121	0.589**	0.472*	0.315	
	Sig. (2-tailed)	0.022	0.0432	0.0050	0.0202	0.0281	0.0000	0.0101	0.0175	0.0003	0.0021	0.0085	0.0050	0.0039	0.0052	0.0055	0.0002	0.0015	0.0017	

	N	26	26	26	26	26	26	26	26	26	2	2	2	2	2	26	26	26	26	26
Estimate d LoE - Curr ent (A - lowes t)	Cor rela tion	-	-	-	0.	-	-	-	-	-	0.	-	-	-	-	0.2	-	-	-	-
	Coe ffi ent	0.	0.	0.2	0.29	0.	.4	0.	0.	.6	1	0	1	2	4	85	0.1	.39	0.2	.44
	Sig. (2- tail ed)	0.	0.	0.1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.1	0.5	0.0	0.2	0.0
		13	77	80	14	41	03	26	06	00	2	9	7	3	59	22	43	61	24	
		9	8		0	6	1	1	7	0	1	3	3	7						
	N	26	26	26	26	26	26	26	26	26	2	2	2	2	2	26	26	26	26	26
Self- Esti mate d Lang uage Use - Over all (Que stion naire) (A - lowes t)	Cor rela tion	-	0.	-	0.	-	-	-	-	-	0.	0.	0.	0.	0.1	-	-	-	-	
	Coe ffi ent	0.	0.03	0.2	0.25	0.	0.	0.	.4	.4	0.	0.	1	7	81	0.1	0.3	0.0	.46	
	Sig. (2- tail ed)	0.	0.	0.2	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.3	0.6	0.1	0.6	0.0
		19	87	70	21	59	22	67	00	02	3	5	9	1	77	00	22	78	18	
		1	3		7	3	5	8	9	5	9	6	1	9						
	N	26	26	26	26	26	26	26	26	26	2	2	2	2	2	26	26	26	26	26
Plans	Cor rela tion	-	-	-	0.	-	-	-	-	-	0.	-	0.	-	0.	0.2	-	-	-	-
	Coe ffi ent	0.	0.	0.2	0.17	0.	0.	0.	0.	0.	0.	2	2	0	9	50	0.1	0.0	0.1	0.2
	Sig. (2- tail ed)	0.	0.	0.3	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.2	0.3	0.7	0.5	0.1
		38	32	27	38	28	67	59	29	25	8	0	7	5	19	60	40	93	44	
		3	9		1	5	9	3	0	3	0	4	2	3						
	N	26	26	26	26	26	26	26	26	26	2	2	2	2	2	26	26	26	26	26

Note. **. Correlation is significant at the 0.01 level (2-tailed).*. Correlation is significant at the 0.05 level (2-tailed).

Appendix Table 24

Observation Unit: Participants – Questionnaire - Spearman's Rho

		QMotivatio	QIntegrativene	QInstrument	QAnxiet	Att	Att	
		n	ss	al	y	GB	GA	
Spearman 's rho	% of 1s in AAWL	Correlatio						
		n	0.144	-0.049	-0.025	-0.302	-	0.144
		Coefficien					0.070	
		t						
	% of 2s in AAWL	Sig. (2-	0.484	0.813	0.903	0.134	0.734	0.483
		tailed)						
		N	26	26	26	26	26	26
	% of 3s in AAWL	Correlatio						
		n	-0.011	0.078	0.038	0.101	0.173	-
		Coefficien						0.129
		t						
	% of 4s in AAWL	Sig. (2-	0.956	0.706	0.855	0.623	0.397	0.529
		tailed)						
		N	26	26	26	26	26	26
	% of 5s in AAWL	Correlatio						
		n	-0.093	-0.172	0.099	0.349	-	-
		Coefficien					0.115	0.251
		t						
% of mispr in AAWL	Sig. (2-	0.650	0.399	0.629	0.080	0.576	0.216	
	tailed)							
	N	26	26	26	26	26	26	
% of 4s in AAWL	Correlatio							
	n	-0.185	0.137	-0.051	0.353	0.005	-	
	Coefficien						0.104	
	t							
% of 5s in AAWL	Sig. (2-	0.366	0.505	0.805	0.077	0.981	0.614	
	tailed)							
	N	26	26	26	26	26	26	
% of 5s in AAWL	Correlatio							
	n	-0.151	-0.305	0.182	0.285	-	0.104	
	Coefficien					0.214		
	t							
% of mispr in AAWL	Sig. (2-	0.461	0.129	0.372	0.158	0.293	0.614	
	tailed)							
	N	26	26	26	26	26	26	
% of mispr in AAWL	Correlatio							
	n	-0.293	-0.181	-0.061	0.315	0.080	-	
	Coefficien						0.216	
	t							

		Sig. (2-tailed)	0.147	0.377	0.769	0.117	0.697	0.290
		N	26	26	26	26	26	26
% of 3s in AAFS	Correlation Coefficient		-0.026	-0.078	0.084	0.044	-	-
	t						0.052	0.322
		Sig. (2-tailed)	0.900	0.706	0.683	0.830	0.802	0.108
		N	26	26	26	26	26	26
% of 4s in AAFS	Correlation Coefficient							
	t							
		Sig. (2-tailed)						
		N	26	26	26	26	26	26
% of 5s in AAFS	Correlation Coefficient		-0.314	-0.030	-.465*	-0.262	-	-
	t						0.142	0.075
		Sig. (2-tailed)	0.119	0.883	0.017	0.196	0.490	0.716
		N	26	26	26	26	26	26
% of 1s in AATotal	Correlation Coefficient		0.112	-0.065	0.032	-0.271	-	0.149
	t						0.072	
		Sig. (2-tailed)	0.585	0.752	0.877	0.180	0.728	0.467
		N	26	26	26	26	26	26
% of 2s in AATotal	Correlation Coefficient		0.049	0.103	-0.004	0.089	0.186	-
	t							0.129
		Sig. (2-tailed)	0.813	0.617	0.984	0.665	0.364	0.529
		N	26	26	26	26	26	26
% of 3s in AATotal	Correlation Coefficient		-0.141	-0.273	0.074	0.354	-	-
	t						0.150	0.287
		Sig. (2-tailed)	0.493	0.177	0.719	0.076	0.466	0.156

	N	26	26	26	26	26	26
% of 4s in AATotal	Correlation						
	Coefficient	-0.185	0.137	-0.051	0.353	0.005	0.104
	Sig. (2-tailed)	0.366	0.505	0.805	0.077	0.981	0.614
	N	26	26	26	26	26	26
% of 5s in AATotal	Correlation						
	Coefficient	-0.170	-0.249	0.110	0.273	0.209	0.085
	Sig. (2-tailed)	0.405	0.220	0.594	0.177	0.305	0.680
	N	26	26	26	26	26	26

Note. **. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Appendix Table 25

Observation Unit: Participants – Student's T Test for Independent Samples – Gender - Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
AAWL /r/-fullness index	F	14	1.8071	0.38463	0.10280
	M	12	1.5841	0.34872	0.10067
AAFS /r/-fullness index	F	14	1.5741	0.33932	0.09069
	M	12	1.3788	0.20363	0.05878
AATotal /r/-fullness index	F	14	1.7505	0.36579	0.09776
	M	12	1.5407	0.30554	0.08820
% of 1s in AAFS	F	14	47.0632	28.78401	7.69285
	M	12	62.9745	19.73548	5.69714

% of 2s in AAFS	F	14	48.3430	27.96184	7.47312
	M	12	35.7944	19.92422	5.75163

Appendix Table 26

Observation Unit: Participants – Student's T Test for Independent Samples – Gender - Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
AAWL /r/-fullness index	Equal variances assumed	0.036	0.851	1.538	24	0.137	0.22300	0.14501	-0.07628	0.52228
	Equal variances not assumed			1.550	23.906	0.134	0.22300	0.14388	-0.07401	0.52001
AAFS /r/- fullness index	Equal variances assumed	5.039	0.034	1.741	24	0.094	0.19537	0.11222	-0.03624	0.42698
	Equal variances not assumed			1.808	21.693	0.085	0.19537	0.10807	-0.02894	0.41968
AATotal /r/-fullness index	Equal variances assumed	0.226	0.639	1.570	24	0.129	0.20975	0.13356	-0.06591	0.48540
	Equal variances not assumed			1.593	23.991	0.124	0.20975	0.13167	-0.06201	0.48150
% of 1s in AAFS	Equal variances assumed	4.070	0.055	-1.615	24	0.119	-15.91136	9.85300	-36.24696	4.42424
	Equal variances not assumed			-1.662	22.995	0.110	-15.91136	9.57274	-35.71430	3.89157

% of 2s in AAFS	Equal variances assumed	3.231	0.085	1.296	24	0.207	12.54859	9.67996	-7.42987	32.52705
	Equal variances not assumed			1.331	23.300	0.196	12.54859	9.43020	-6.94536	32.04254

Appendix Table 27

Observation Unit: Participants – Student's T Test for Independent Samples – Education - Place - Group Statistics

Education - Place	N	Mean	Std. Deviation	Std. Error Mean
AAWL /r/-fullness index	PL 20	1.7922	0.36339	0.08126
	UK 6	1.4107	0.28328	0.11565
AAFS /r/-fullness index	PL 20	1.5245	0.30782	0.06883
	UK 6	1.3489	0.22671	0.09255
AATotal /r/-fullness index	PL 20	1.7315	0.34006	0.07604
	UK 6	1.3942	0.25633	0.10464
% of 1s in AAFS	PL 20	51.1257	26.38740	5.90040
	UK 6	65.3441	22.48707	9.18031
% of 2s in AAFS	PL 20	44.9914	25.69267	5.74506
	UK 6	34.4178	22.31719	9.11095

Appendix Table 28

Observation Unit: Participants – Student's T Test for Independent Samples – Education - Place - Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
AAWL /r/-fullness index	Equal variances assumed	0.337	0.567	2.354	24	0.027	0.38154	0.16209	0.04700	0.71608
	Equal variances not assumed			2.699	10.483	0.021	0.38154	0.14134	0.06856	0.69451
AAFS /r/- fullness index	Equal variances assumed	1.069	0.312	1.288	24	0.210	0.17555	0.13628	-0.10572	0.45682
	Equal variances not assumed			1.522	11.162	0.156	0.17555	0.11534	-0.07787	0.42897
AATotal /r/-fullness index	Equal variances assumed	0.408	0.529	2.233	24	0.035	0.33724	0.15100	0.02559	0.64888
	Equal variances not assumed			2.607	10.876	0.025	0.33724	0.12935	0.05213	0.62234
% of 1s in AAFS	Equal variances assumed	0.754	0.394	-1.192	24	0.245	-14.21840	11.92725	-38.83503	10.39823
	Equal variances not assumed			-1.303	9.555	0.223	-14.21840	10.91297	-38.68835	10.25156
% of 2s in AAFS	Equal variances assumed	0.525	0.476	0.908	24	0.373	10.57355	11.64944	-13.46972	34.61681
	Equal variances not assumed			0.982	9.377	0.351	10.57355	10.77103	-13.64389	34.79099

Appendix Table 29

Observation Unit: Participants – Student's T Test for Independent Samples – Education - Current - Group Statistics

	Education - Current (Y/N)	N	Mean	Std. Deviation	Std. Error Mean
AAWL /r/-fullness index	No	23	1.7428	0.36468	0.07604
	Yes	3	1.4080	0.42368	0.24461
AAFS /r/-fullness index	No	23	1.4924	0.28708	0.05986
	Yes	3	1.4191	0.43131	0.24902
AATotal /r/-fullness index	No	23	1.6854	0.33628	0.07012
	Yes	3	1.4102	0.42530	0.24555
% of 1s in AAFS	No	23	53.7748	24.34409	5.07609
	Yes	3	59.2526	42.26942	24.40426
% of 2s in AAFS	No	23	42.9376	23.44084	4.88775
	Yes	3	39.5894	41.41427	23.91054

Appendix Table 30

Observation Unit: Participants – Student's T Test for Independent Samples – Education - Current - Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
AAWL /r/-fullness index	Equal variances assumed	0.010	0.922	1.474	24	0.153	0.33476	0.22710	-0.13394	0.80346
	Equal variances not assumed			1.307	b	0.302	0.33476	0.25616	-0.60786	1.27738
AAFS /r/-fullness	Equal variances	0.651	0.428	0.396	24	0.695	0.07339	0.18523	-0.30890	0.45568

index	assumed										
AATotal /r/-fullness index	Equal variances not assumed										
		0.287	2.237	0.799	0.07339	0.25611	-0.92387	1.07065			
/r/-fullness index	Equal variances assumed	0.125	0.727	1.301	24	0.206	0.27521	0.21152	-0.16134	0.711176	
	Equal variances not assumed										
% of 1s in AAFS	Equal variances assumed	1.592	0.219	-0.339	24	0.737	-5.47779	16.14951	-38.80873	27.85316	
	Equal variances not assumed										
% of 2s in AAFS	Equal variances assumed	1.796	0.193	0.215	24	0.832	3.34828	15.60932	-28.86777	35.56433	
	Equal variances not assumed										
AAFS	Equal variances not assumed										
AAFS	Equal variances not assumed										
AAFS	Equal variances not assumed										

Appendix Table 31

Observation Unit: Participants – Student's T Test for Independent Samples – Formal Instruction in English in Poland - Group Statistics

Formal Instruction in English in Poland (Y/N)		N	Mean	Std. Deviation	Std. Error Mean
AAWL /r/-fullness index	No	3	2.1287	0.43056	0.24858
	Yes	23	1.6488	0.34379	0.07168
AAFS /r/-fullness index	No	3	1.8034	0.39823	0.22992
	Yes	23	1.4423	0.26425	0.05510
AATotal` r-fullness index	No	3	2.0753	0.41173	0.23771
	Yes	23	1.5987	0.30959	0.06455

% of 1s in AAFS	No	3	34.9779	28.08515	16.21497
	Yes	23	56.9411	25.07560	5.22862
% of 2s in AAFS	No	3	49.7005	34.23670	19.76657
	Yes	23	41.6188	24.33740	5.07470

Appendix Table 32

Observation Unit: Participants – Student's T Test for Independent Samples – Formal Instruction in English in Poland - Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
AAWL /r/- fullness index	Equal variances assumed	0.030	0.864	2.222	24	0.036	0.47992	0.21597	0.03417	0.92567
	Equal variances not assumed			1.855	2.345	0.186	0.47992	0.25871	-0.49012	1.44996
AAFS /r/- fullness index	Equal variances assumed	0.674	0.420	2.117	24	0.045	0.36113	0.17059	0.00906	0.71320
	Equal variances not assumed			1.527	2.236	0.253	0.36113	0.23643	-0.55998	1.28224
AATotal` r-fullness index	Equal variances assumed	0.217	0.646	2.431	24	0.023	0.47665	0.19603	0.07206	0.88124
	Equal variances not assumed			1.935	2.305	0.176	0.47665	0.24632	-0.45960	1.41290
% of 1s in AAFS	Equal variances assumed	0.000	0.987	-1.412	24	0.171	-21.96321	15.55499	-54.06712	10.14070

% of 2s in AAFS	Equal variances not assumed			-1.289	2.435	0.306	-21.96321	17.03713	-84.04142	40.11499
	Equal variances assumed	0.616	0.440	0.520	24	0.608	8.08169	15.53694	-23.98499	40.14836
	Equal variances not assumed			0.396	2.271	0.726	8.08169	20.40759	-70.39810	86.56147

Appendix Table 33

Observation Unit: Participants – Student's T Test for Independent Samples – Formal Instruction in English in UK - Group Statistics

Formal Instruction in English in UK	N	Mean	Std. Deviation	Std. Error Mean	
AAWL /r/-fullness index	No	10	1.6980	0.30767	0.09729
	Yes	16	1.7080	0.42658	0.10665
AAFS /r/-fullness index	No	10	1.4692	0.22430	0.07093
	Yes	16	1.4932	0.34090	0.08522
AAATotal /r/-fullness index	No	10	1.6429	0.27293	0.08631
	Yes	16	1.6604	0.39819	0.09955
% of 1s in AAFS	No	10	53.5598	22.50372	7.11630
	Yes	16	54.9363	28.42721	7.10680
% of 2s in AAFS	No	10	45.9623	22.60341	7.14783
	Yes	16	40.4195	26.78451	6.69613

Appendix Table 34

Observation Unit: Participants – Student's T Test for Independent Samples – Formal Instruction in English in UK - Independent Samples Test

		Independent Samples Test								
		Levene's Test for Equality of Variances			t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
AAWL /r/-fullness index	Equal variances assumed	1.866	0.185	-0.065	24	0.949	-0.01006	0.15572	-0.33146	0.31134
	Equal variances not assumed			-0.070	23.374	0.945	-0.01006	0.14436	-0.30842	0.28831
AAFS /r/-fullness index	Equal variances assumed	2.230	0.148	-0.197	24	0.845	-0.02404	0.12194	-0.27571	0.22762
	Equal variances not assumed			-0.217	23.881	0.830	-0.02404	0.11088	-0.25295	0.20486
AATotal /r/-fullness index	Equal variances assumed	1.876	0.183	-0.121	24	0.904	-0.01745	0.14367	-0.31398	0.27908
	Equal variances not assumed			-0.132	23.704	0.896	-0.01745	0.13175	-0.28955	0.25465
% of 1s in AAFS	Equal variances assumed	1.086	0.308	-0.130	24	0.898	-1.37645	10.62700	-23.30950	20.55659
	Equal variances not assumed			-0.137	22.485	0.892	-1.37645	10.05725	-22.20787	19.45497
% of 2s in AAFS	Equal variances assumed	0.450	0.509	0.544	24	0.592	5.54280	10.19783	-15.50449	26.59009
	Equal variances not assumed			0.566	21.700	0.577	5.54280	9.79436	-14.78573	25.87134

Appendix Table 35

Observation Unit: Participants – Student's T Test for Independent Samples – Phonetic Training - Group Statistics

Phonetic Training	N	Mean	Std. Deviation	Std. Error Mean	
AAWL/r/-fullness index	No	23	1.7667	0.35347	0.07370
	Yes	3	1.2244	0.16232	0.09372
AAFS /r/-fullness index	No	23	1.5209	0.28788	0.06003
	Yes	3	1.2010	0.22882	0.13211
AAATotal /r/ -fullness index	No	23	1.7103	0.32761	0.06831
	Yes	3	1.2194	0.15793	0.09118
% of 1s in AAFS	No	23	51.0820	24.71686	5.15382
	Yes	3	79.8973	22.88183	13.21083
% of 2s in AAFS	No	23	45.4794	24.11363	5.02804
	Yes	3	20.1027	22.88183	13.21083

Appendix Table 36

Observation Unit: Participants – Student's T Test for Independent Samples – Phonetic Training - Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
AAWL/r/- fullness index	Equal variances assumed	1.330	0.260	2.586	24	<u>0.016</u>	0.54238	0.20972	0.10953	0.97523
	Equal variances not assumed			4.549	5.063	0.006	0.54238	0.11923	0.23704	0.84771

AAFS /r/- fullness index	Equal variances assumed	0.407	0.530	1.838	24	0.078	0.31986	0.17398	-0.03923	0.67894
	Equal variances not assumed			2.204	2.900	0.118	0.31986	0.14511	-0.15109	0.79080
AATotal /r/ -fullness index	Equal variances assumed	1.000	0.327	2.523	24	<u>0.019</u>	0.49089	0.19456	0.08934	0.89245
	Equal variances not assumed			4.309	4.739	0.009	0.49089	0.11393	0.19312	0.78867
% of 1s in AAFS	Equal variances assumed	0.249	0.623	-1.911	24	0.068	-28.81525	15.08179	-59.94252	2.31203
	Equal variances not assumed			-2.032	2.650	0.147	-28.81525	14.18055	-77.51657	19.88608
% of 2s in AAFS	Equal variances assumed	0.170	0.684	1.722	24	0.098	25.37666	14.74061	-5.04647	55.79979
	Equal variances not assumed			1.795	2.616	0.184	25.37666	14.13532	-23.57965	74.33297

Appendix Table 37

Observation Unit: Participants – Mann-Whitney U Test – Gender - Ranks

Gender	N	Mean Rank	Sum of Ranks	
% of 1s in AAWL	F	14	11.29	158.00
	M	12	16.08	193.00
	Total	26		
% of 2s in AAWL	F	14	15.79	221.00
	M	12	10.83	130.00
	Total	26		
% of 3s in AAWL	F	14	14.29	200.00
	M	12	12.58	151.00
	Total	26		
% of 4s in AAWL	F	14	14.36	201.00

	M	12	12.50	150.00
	Total	26		
% of 5s in AAWL	F	14	12.25	171.50
	M	12	14.96	179.50
	Total	26		
% of mispr in AAWL	F	14	13.46	188.50
	M	12	13.54	162.50
	Total	26		
% of 3s in AAFS	F	14	12.86	180.00
	M	12	14.25	171.00
	Total	26		
% of 4s in AAFS	F	14	13.50	189.00
	M	12	13.50	162.00
	Total	26		
% of 5s in AAFS	F	14	13.39	187.50
	M	12	13.63	163.50
	Total	26		
% of 1s in AATotal	F	14	11.07	155.00
	M	12	16.33	196.00
	Total	26		
% of 2s in AATotal	F	14	15.43	216.00
	M	12	11.25	135.00
	Total	26		
% of 3s in AATotal	F	14	13.64	191.00
	M	12	13.33	160.00
	Total	26		
% of 4s in AATotal	F	14	14.36	201.00
	M	12	12.50	150.00
	Total	26		
% of 5s in AATotal	F	14	12.54	175.50
	M	12	14.63	175.50
	Total	26		

Appendix Table 38

Observation Unit: Participants – Mann-Whitney U Test – Gender – Test Statistics

	% of 1s in AA WL	% of 2s in AA WL	% of 3s in AA WL	% of 4s in AA WL	% of 5s in AA WL	% of misp r in AA WL	% of 3s in AAF S	% of 4s in AAF S	% of 5s in AAF S	% of 1s in AAT otal	% of 2s in AAT otal	% of 3s in AAT otal	% of 4s in AAT otal	% of 5s in AAT otal
Mann														
-	53.0	52.0	73.0	72.0	66.5	83.5	75.0	84.0	82.5	50.00	57.00	82.00	72.00	70.50
Whitney U	00	00	00	00	00	00	00	00	00	0	0	0	0	0
Wilcoxon														
W	158.000	130.000	151.000	150.000	171.500	188.500	180.000	162.000	187.500	155.000	135.000	160.000	150.000	175.500
Z	-1.594	-1.646	-0.588	-1.335	-1.028	-0.026	-0.515	0.000	-0.167	-1.749	-1.389	-0.105	-1.335	-0.772
Asym p-Sig. (2-tailed)	0.111	0.100	0.556	0.182	0.304	0.979	0.607	1.000	0.867	0.080	0.165	0.916	0.182	0.440
Exact Sig. [2*(1-tailed Sig.)]	.118 ^b	.106 ^b	.595 ^b	.560 ^b	.374 ^b	.980 ^b	.667 ^b	1.000 ^b	.940 ^b	.085 ^b	.176 ^b	.940 ^b	.560 ^b	.494 ^b

Appendix Table 39

Observation Unit: Participants – Means Comparison – Gender

Gender		% of 1s in AA WL	% of 2s in AA WL	% of 3s in AA WL	% of 4s in AA WL	% of 5s in AA WL	% of misp r in AA WL	% of 3s in AAF S	% of 4s in AAF S	% of 5s in AAF S	% of 1s in AAT total	% of 2s in AAT total	% of 3s in AAT total	% of 4s in AAT total	% of 5s in AAT total
	F	Mean	25.62 20	67.97 41	5.971 3	0.18 21	0.25 05	8.38 10	4.503 5	0.00 00	0.09 04	31.08 14	62.69 32	5.858 5	0.150 6
Std. Devia tion		30.79 706	29.08 558	13.72 091	0.55 642	0.47 129	3.86 616	11.85 309	0.00 000	0.33 831	28.88 463	26.06 926	12.42 465	0.466 01	0.345 17
M	Mean	43.50 09	53.28 85	2.446 5	0.00 00	0.76 41	8.33 33	1.041 7	0.00 00	0.18 94	47.59 17	49.60 75	2.148 1	0.000 0	0.652 8
	Std. Devia tion	31.52 636	29.96 454	4.174 12	0.00 000	1.50 045	4.50 913	1.239 03	0.00 000	0.65 608	27.93 689	26.96 739	3.427 54	0.000 00	1.336 14
To tal	Mean	33.87 38	61.19 61	4.344 5	0.09 81	0.48 75	8.35 90	2.905 7	0.00 00	0.13 61	38.70 15	56.65 36	4.146 0	0.081 1	0.417 8
	Std. Devia tion	31.82 983	29.84 478	10.42 950	0.41 179	1.08 364	4.08 893	8.765 31	0.00 000	0.50 144	29.11 543	26.78 878	9.434 02	0.344 66	0.946 94

Appendix Table 40

Observation Unit: Participants – Mann-Whitney U Test – Education - Place - Ranks

	Education - Place	N	Mean Rank	Sum of Ranks
% of 1s in AAWL	PL	20	11.65	233.00
	UK	6	19.67	118.00
	Total	26		
% of 2s in AAWL	PL	20	15.00	300.00
	UK	6	8.50	51.00
	Total	26		
% of 3s in AAWL	PL	20	15.45	309.00
	UK	6	7.00	42.00
	Total	26		
% of 4s in AAWL	PL	20	13.80	276.00
	UK	6	12.50	75.00
	Total	26		

% of 5s in AAWL	PL	20	15.00	300.00
	UK	6	8.50	51.00
	Total	26		
% of mispr in AAWL	PL	20	15.25	305.00
	UK	6	7.67	46.00
	Total	26		
% of 3s in AAFS	PL	20	14.70	294.00
	UK	6	9.50	57.00
	Total	26		
% of 4s in AAFS	PL	20	13.50	270.00
	UK	6	13.50	81.00
	Total	26		
% of 5s in AAFS	PL	20	13.80	276.00
	UK	6	12.50	75.00
	Total	26		
% of 1s in AA Total	PL	20	11.65	233.00
	UK	6	19.67	118.00
	Total	26		
% of 2s in AA Total	PL	20	15.05	301.00
	UK	6	8.33	50.00
	Total	26		
% of 3s in AA Total	PL	20	15.50	310.00
	UK	6	6.83	41.00
	Total	26		
% of 4s in AA Total	PL	20	13.80	276.00
	UK	6	12.50	75.00
	Total	26		
% of 5s in AA Total	PL	20	15.15	303.00
	UK	6	8.00	48.00
	Total	26		

Appendix Table 41

Observation Unit: Participants – Mann-Whitney U Test – Education - Place – Test Statistics

	% of 1s in AA WL	% of 2s in AA WL	% of 3s in AA WL	% of 4s in AA WL	% of 5s in AA WL	% of misp r in AA WL	% of 3s in AA FS	% of 4s in AA FS	% of 5s in AA FS	% of 1s in AAT otal	% of 2s in AAT otal	% of 3s in AAT otal	% of 4s in AAT otal	% of 5s in AAT otal
Mann														
-	23.0	30.0	21.0	54.0	30.0	25.0	36.0	60.0	54.0	23.00	29.00	20.00	54.00	27.00
Whit														
ney U	00	00	00	00	00	00	00	00	00	0	0	0	0	0
Wilco														
xon	233.	51.0	42.0	75.0	51.0	46.0	57.0	81.0	75.0	233.0	50.00	41.00	75.00	48.00
W	000	00	00	00	00	00	00	00	00	00	0	0	0	0
Z														
-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-
2.25	1.82	2.46	0.79	2.08	2.13	1.62	0	0.79	2.252	1.887	2.486	0.790	2.234	
	2	6	8	0	4	6	4	0						
Asym														
p. Sig.														
(2-	0.02	0.06	0.01	0.43	0.03	0.03	0.10	1.00	0.43	0.024	0.059	0.013	0.430	0.025
tailed	4	8	4	0	7	3	4	0	0					
)														
Exact														
Sig.														
[2*(1-	.023 ^b	.072 ^b	.016 ^b	.744 ^b	.072 ^b	.033 ^b	.157 ^b	1.00 ^{0^b}	.744 ^b	.023 ^b	.062 ^b	.013 ^b	.744 ^b	.046 ^b
tailed														
Sig.)]														

Appendix Table 42

Observation Unit: Participants – Means Comparison – Education - Place

Education - Place	% of	% of	% of	% of	% of	% of	% of	% of	% of	% of	% of	% of	% of	% of	
	1s in AA WL	2s in AA WL	3s in AA WL	4s in AA WL	5s in AA WL	misp r in AA WL	3s in AAF S	4s in AAF S	5s in AAF S	1s in AAT total	2s in AAT total	3s in AAT total	4s in AAT total	5s in AAT total	
PL	Mean	26.33	67.28	5.624	0.12	0.63	9.22	3.70	0.00	0.17	32.10	61.89	5.355	0.105	0.543
	Std. Deviation	24	19	4	75	38	22	60	00	69	52	08	5	4	1
U	Mean	59.01	40.91	0.077	0.00	0.00	5.48	0.23	0.00	0.00	60.68	39.19	0.114	0.000	0.000
	Std. Deviation	18	03	9	00	00	15	81	00	00	93	65	3	0	0
Total	Mean	33.87	61.19	4.344	0.09	0.48	8.35	2.90	0.00	0.13	38.70	56.65	4.146	0.081	0.417
	Std. Deviation	38	61	5	81	75	90	57	00	61	15	36	0	1	8

Appendix Table 43

Observation Unit: Participants – Mann-Whitney U Test – Education - Current - Ranks

Education - Current (Y/N)	N	Mean Rank	Sum of Ranks	
% of 1s in AAWL	No	23	12.70	292.00
	Yes	3	19.67	59.00
	Total	26		
% of 2s in AAWL	No	23	14.22	327.00
	Yes	3	8.00	24.00
	Total	26		
% of 3s in AAWL	No	23	13.65	314.00
	Yes	3	12.33	37.00
	Total	26		
% of 4s in AAWL	No	23	13.63	313.50
	Yes	3	12.50	37.50
	Total	26		
% of 5s in AAWL	No	23	13.70	315.00

	Yes	3	12.00	36.00
	Total	26		
	No	23	13.41	308.50
% of mispr in AAWL	Yes	3	14.17	42.50
	Total	26		
	No	23	13.09	301.00
% of 3s in AAFS	Yes	3	16.67	50.00
	Total	26		
	No	23	13.50	310.50
% of 4s in AAFS	Yes	3	13.50	40.50
	Total	26		
	No	23	13.63	313.50
% of 5s in AAFS	Yes	3	12.50	37.50
	Total	26		
	No	23	12.91	297.00
% of 1s in AATotal	Yes	3	18.00	54.00
	Total	26		
	No	23	13.96	321.00
% of 2s in AATotal	Yes	3	10.00	30.00
	Total	26		
	No	23	13.57	312.00
% of 3s in AATotal	Yes	3	13.00	39.00
	Total	26		
	No	23	13.63	313.50
% of 4s in AATotal	Yes	3	12.50	37.50
	Total	26		
	No	23	13.80	317.50
% of 5s in AATotal	Yes	3	11.17	33.50
	Total	26		

Appendix Table 44

Observation Unit: Participants – Mann-Whitney U Test – Education - Current – Test Statistics

	% of 1s in AA WL	% of 2s in AA WL	% of 3s in AA WL	% of 4s in AA WL	% of 5s in AA WL	% of misp r in AA WL	% of 3s in AAF S	% of 4s in AA FS	% of 5s in AA FS	% of 1s in AAT otal	% of 2s in AAT otal	% of 3s in AAT otal	% of 4s in AAT otal	% of 5s in AAT otal
Mann														
-	16.0	18.0	31.0	31.5	30.0	32.5	25.0	34.5	31.5	21.00	24.00	33.00	31.50	27.50
Whit	00	00	00	00	00	00	00	00	00	0	0	0	0	0
ney U														
Wilco														
xon	292.	24.0	37.0	37.5	36.0	308.	301.	40.5	37.5	297.0	30.00	39.00	37.50	33.50
W	000	00	00	00	00	500	000	00	00	00	0	0	0	0
Z	1.48	1.32	0.29	0.52	0.41	0.16	0.84	0.00	0.52	-	-	-	-	-
	5	4	2	1	2	1	8	0	1	1.083	0.843	0.123	0.521	0.625
Asym														
p. Sig.	0.13	0.18	0.77	0.60	0.68	0.87	0.39	1.00	0.60	0.279	0.399	0.902	0.602	0.532
(2-	8	5	0	2	0	2	6	0	2					
tailed														
)														
Exact														
Sig.														
[2*(1-	.157 ^b	.211 ^b	.821 ^b	.821 ^b	.762 ^b	.880 ^b	.490 ^b	1.00 ^{0^b}	.821 ^b	.312 ^b	.442 ^b	.940 ^b	.821 ^b	.594 ^b
tailed														
Sig.)]														

Appendix Table 45

Observation Unit: Participants – Means Comparison – Education - Current

Education - Current (Y/N)	% of 1s in AA WL	% of 2s in AA WL	% of 3s in AA WL	% of 4s in AA WL	% of 5s in AA WL	% of misp r in AA WL	% of 3s in AAF S	% of 4s in AAF S	% of 5s in AAF S	% of 1s in AAT total	% of 2s in AAT total	% of 3s in AAT total	% of 4s in AAT total	% of 5s in AAT total	
	No	Mean 75	64.07 65	4.804 6	0.11 09	0.53 06	8.46 38	3.13 37	0.00 00	0.15 39	35.95 05	58.93 10	4.570 3	0.091 7	0.456 4
Yes	Mean 26	39.11 32	0.817 0	0.00 00	0.15 72	7.55 56	1.15 80	0.00 00	0.00 00	59.79 25	39.19 35	0.892 7	0.000 0	0.121 2	
Total	Mean 38	41.61 158	40.91 539	0.761 68	0.00 000	0.27 234	3.47 122	1.01 400	0.00 000	0.00 836	41.74 890	41.01 99	0.811 00	0.209 95	
	Mean 38	33.87 61	61.19 5	4.344 81	0.09 75	0.48 90	8.35 57	2.90 00	0.13 61	38.70 15	56.65 36	4.146 0	0.081 1	0.417 8	
	Mean 38	31.82 983	29.84 478	10.42 950	0.41 179	1.08 364	4.08 893	8.76 531	0.00 000	0.50 144	29.11 543	26.78 878	9.434 02	0.344 66	0.946 94

Appendix Table 46

Observation Unit: Participants – Mann-Whitney U Test – Formal Instruction in English in Poland - Ranks

Formal Instruction in English in Poland (Y/N)	N	Mean Rank	Sum of Ranks
% of 1s in AAWL	No	3	6.33
	Yes	23	14.43
	Total	26	
% of 2s in AAWL	No	3	11.67
	Yes	23	13.74
	Total	26	
% of 3s in AAWL	No	3	23.67
	Yes	23	12.17
	Total	26	
% of 4s in AAWL	No	3	21.17
	Yes	23	12.50
	Total	26	
% of 5s in AAWL	No	3	16.50

	Yes	23	13.11	301.50
	Total	26		
	No	3	18.50	55.50
% of mispr in AAWL	Yes	23	12.85	295.50
	Total	26		
	No	3	19.00	57.00
% of 3s in AAFS	Yes	23	12.78	294.00
	Total	26		
	No	3	13.50	40.50
% of 4s in AAFS	Yes	23	13.50	310.50
	Total	26		
	No	3	12.50	37.50
% of 5s in AAFS	Yes	23	13.63	313.50
	Total	26		
	No	3	6.33	19.00
% of 1s in AATotal	Yes	23	14.43	332.00
	Total	26		
	No	3	12.00	36.00
% of 2s in AATotal	Yes	23	13.70	315.00
	Total	26		
	No	3	23.67	71.00
% of 3s in AATotal	Yes	23	12.17	280.00
	Total	26		
	No	3	21.17	63.50
% of 4s in AATotal	Yes	23	12.50	287.50
	Total	26		
	No	3	16.33	49.00
% of 5s in AATotal	Yes	23	13.13	302.00
	Total	26		

Appendix Table 47

Observation Unit: Participants – Mann-Whitney U Test – Formal Instruction in English in Poland – Test Statistics

	% of 1s in AA WL	% of 2s in AA WL	% of 3s in AA WL	% of 4s in AA WL	% of 5s in AA WL	% of misp r in AA WL	% of 3s in AAF S	% of 4s in AAF S	% of 5s in AA FS	% of 1s in AAT otal	% of 2s in AAT otal	% of 3s in AAT otal	% of 4s in AAT otal	% of 5s in AAT otal
Mann														
-	13.0	29.0	4.00	11.5	25.5	19.5	18.0	34.5	31.5	13.00	30.00	4.000	11.50	26.00
Whit	00	00	0	00	00	00	00	00	00	0	0		0	0
ney U														
Wilco														
xon	19.0	35.0	280.	287.	301.	295.	294.	310.	37.5	19.00	36.00	280.0	287.5	302.0
W	00	00	000	500	500	500	000	500	00	0	0	00	00	00
Z	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-
	1.72	0.44	2.54	3.99	0.82	1.20	1.47	0	0.52	1.726	0.361	2.500	3.993	0.759
	6	1	5	3	5	7	3		1					
Asym														
p. Sig.	0.08	0.65	0.01	0.00	0.41	0.22	0.14	1.00	0.60	0.084	0.718	0.012	0.000	0.448
(2-	4	9	1	0	0	7	1	0	2					
tailed														
)														
Exact														
Sig.	.095	.705	.008 ^b	.064 ^b	.490 ^b	.242 ^b	.211 ^b	1.00	.821	.095 ^b	.762 ^b	.008 ^b	.064 ^b	.541 ^b
[2*(1-	_b	_b						0 ^b	_b					
tailed														
Sig.)]														

Appendix Table 48

Observation Unit: Participants – Means Comparison – Formal Instruction in English in Poland

	Formal Instruction in English in Poland (Y/N)	% of	% of	% of	% of	% of	% of	% of	% of						
		1s in AA WL	2s in AA WL	3s in AA WL	4s in AA WL	5s in AA WL	misp r in AA WL	3s in AAF S	4s in AAF S	5s in AAF S	1s in AAT total	2s in AAT total	3s in AAT total	4s in AAT total	5s in AAT total
No	Mean	13.3338	61.0100	24.4703	0.8499	0.3360	10.8148	15.3216	0.0000	0.0000	17.3691	58.1576	23.4877	0.7030	0.2826
	Std. Deviation	19.60331	15.61240	23.65452	1.07756	0.29123	2.60421	24.29450	0.00000	0.00000	20.25635	6.80590	19.69823	0.91057	0.24491
Yes	Mean	36.5529	61.2204	1.7193	0.0000	0.5073	8.0386	1.2863	0.0000	0.1539	41.4840	56.4575	1.6231	0.0000	0.4354
	Std. Deviation	32.42411	31.46438	3.20964	0.00000	1.15029	4.17768	3.14451	0.00000	0.53186	29.25496	28.47699	2.86264	0.00000	1.00534
Total	Mean	33.8738	61.1961	4.3445	0.0981	0.4875	8.3590	2.9057	0.0000	0.1361	38.7015	56.6536	4.1460	0.0811	0.4178
	Std. Deviation	31.82983	29.84478	10.42950	0.41179	1.08364	4.08893	8.76531	0.00000	0.50144	29.11543	26.78878	9.43402	0.34466	0.9494

Appendix Table 49

Observation Unit: Participants – Mann-Whitney U Test – Formal Instruction in English in UK - Ranks

	Formal Instruction in English in UK	N	Mean Rank	Sum of Ranks
% of 1s in AAWL	No	10	14.00	140.00
	Yes	16	13.19	211.00
	Total	26		
% of 2s in AAWL	No	10	14.80	148.00
	Yes	16	12.69	203.00
	Total	26		
% of 3s in AAWL	No	10	10.30	103.00
	Yes	16	15.50	248.00
	Total	26		
% of 4s in AAWL	No	10	12.50	125.00
	Yes	16	14.13	226.00
	Total	26		

% of 5s in AAWL	No	10	13.10	131.00
	Yes	16	13.75	220.00
	Total	26		
% of mispr in AAWL	No	10	9.85	98.50
	Yes	16	15.78	252.50
	Total	26		
% of 3s in AAFS	No	10	11.40	114.00
	Yes	16	14.81	237.00
	Total	26		
% of 4s in AAFS	No	10	13.50	135.00
	Yes	16	13.50	216.00
	Total	26		
% of 5s in AAFS	No	10	12.50	125.00
	Yes	16	14.13	226.00
	Total	26		
% of 1s in AATotal	No	10	13.70	137.00
	Yes	16	13.38	214.00
	Total	26		
% of 2s in AATotal	No	10	15.20	152.00
	Yes	16	12.44	199.00
	Total	26		
% of 3s in AATotal	No	10	10.20	102.00
	Yes	16	15.56	249.00
	Total	26		
% of 4s in AATotal	No	10	12.50	125.00
	Yes	16	14.13	226.00
	Total	26		
% of 5s in AATotal	No	10	12.80	128.00
	Yes	16	13.94	223.00
	Total	26		

Appendix Table 50

Observation Unit: Participants – Mann-Whitney U Test – Formal Instruction in English in UK – Test Statistics

	% of 1s in AA WL	% of 2s in AA WL	% of 3s in AA WL	% of 4s in AA WL	% of 5s in AA WL	% of mis pr in AA WL	% of 3s in AAF S	% of 4s in AAF S	% of 5s in AAF S	% of 1s in AAT otal	% of 2s in AAT otal	% of 3s in AAT otal	% of 4s in AAT otal	% of 5s in AAT otal
Mann														
-	75.0	67.0	48.0	70.0	76.0	43.5	59.0	80.0	70.0	78.00	63.00	47.00	70.00	73.00
Whit	00	00	00	00	00	00	00	00	00	0	0	0	0	0
ney U														
Wilco														
xon	211.	203.	103.	125.	131.	98.5	114.	216.	125.	214.0	199.0	102.0	125.0	128.0
W	000	000	000	000	000	00	000	000	000	00	00	00	00	00
Z	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-
	0.26	0.68	1.75	1.14	0.24	1.92	1.23	0	1.14	0.105	0.896	1.776	1.140	0.410
	4	5	4	0	1	9	1	0	0					
Asym														
p-														
Sig.	0.79	0.49	0.07	0.25	0.81	0.05	0.21	1.00	0.25	0.916	0.370	0.076	0.254	0.682
(2-	2	3	9	4	0	4	8	0	4					
tailed														
)														
Exact														
Sig.														
[2*(1-	.816 ^b	.517 ^b	.097 ^b	.623 ^b	.856 ^b	.053 ^b	.286 ^b	1.00 ⁰	.623 ^b	.938 ^b	.391 ^b	.087 ^b	.623 ^b	.737 ^b
tailed														
Sig.)]														

Appendix Table 51

Observation Unit: Participants – Means Comparison – Formal Instruction in English in UK

	Formal Instruction in English in UK	% of 1s in AA WL	% of 2s in AA WL	% of 3s in AA WL	% of 4s in AA WL	% of 5s in AA WL	% of mispron in AA WL	% of 3s in AAF S	% of 4s in AAF S	% of 5s in AAF S	% of 1s in AAT total	% of 2s in AAT total	% of 3s in AAT total	% of 4s in AAT total	% of 5s in AAT total
No	Mean	31.4978	66.8770	1.3281	0.0000	0.2970	6.5333	0.4779	0.0000	0.0000	36.8023	61.8262	1.1395	0.0000	0.2320
	Std. Deviation	29.51769	28.32936	3.19826	0.00000	0.42459	3.57433	0.77155	0.00000	0.00000	26.48218	25.71410	2.60699	0.00000	0.32915
Yes	Mean	35.3588	57.6456	6.2297	0.1594	0.6066	9.5000	4.4231	0.0000	0.2212	39.8885	53.4208	6.0250	0.1318	0.5339
	Std. Deviation	34.05395	31.11310	12.85679	0.52172	1.34523	4.07300	11.01401	0.00000	0.63167	31.43494	27.75518	11.59590	0.43687	1.17988
Total	Mean	33.8738	61.1961	4.3445	0.0981	0.4875	8.3590	2.9057	0.0000	0.1361	38.7015	56.6536	4.1460	0.0811	0.4178
	Std. Deviation	31.82983	29.84478	10.42950	0.41179	1.08364	4.08893	8.76531	0.00000	0.50144	29.11543	26.78878	9.43402	0.34466	0.94694

Appendix Table 52

Observation Unit: Participants – Mann-Whitney U Test – Phonetic Training - Ranks

	Phonetic Training	N	Mean Rank	Sum of Ranks
% of 1s in AAWL	No	23	12.30	283.00
	Yes	3	22.67	68.00
	Total	26		
% of 2s in AAWL	No	23	14.65	337.00
	Yes	3	4.67	14.00
	Total	26		
% of 3s in AAWL	No	23	14.48	333.00
	Yes	3	6.00	18.00
	Total	26		
% of 4s in AAWL	No	23	13.63	313.50
	Yes	3	12.50	37.50
	Total	26		
% of 5s in AAWL	No	23	14.15	325.50

	Yes	3	8.50	25.50
	Total	26		
	No	23	14.00	322.00
% of mispr in AAWL	Yes	3	9.67	29.00
	Total	26		
	No	23	14.22	327.00
% of 3s in AAFS	Yes	3	8.00	24.00
	Total	26		
	No	23	13.50	310.50
% of 4s in AAFS	Yes	3	13.50	40.50
	Total	26		
	No	23	13.63	313.50
% of 5s in AAFS	Yes	3	12.50	37.50
	Total	26		
	No	23	12.22	281.00
% of 1s in AATotal	Yes	3	23.33	70.00
	Total	26		
	No	23	14.74	339.00
% of 2s in AATotal	Yes	3	4.00	12.00
	Total	26		
	No	23	14.61	336.00
% of 3s in AATotal	Yes	3	5.00	15.00
	Total	26		
	No	23	13.63	313.50
% of 4s in AATotal	Yes	3	12.50	37.50
	Total	26		
	No	23	14.22	327.00
% of 5s in AATotal	Yes	3	8.00	24.00
	Total	26		

Appendix Table 53

Observation Unit: Participants – Mann-Whitney U Test – Phonetic Training – Test Statistic

	% of 1s in AA WL	% of 2s in AA WL	% of 3s in AA WL	% of 4s in AA WL	% of 5s in AA WL	% of misp r in AA WL	% of 3s in AA FS	% of 4s in AA FS	% of 5s in AA FS	% of 1s in AAT otal	% of 2s in AAT otal	% of 3s in AAT otal	% of 4s in AAT otal	% of 5s in AAT otal
Mann														
-	7.00	8.00	12.0	31.5	19.5	23.0	18.0	34.5	31.5	5.000	6.000	9.000	31.50	18.00
Whit	0	0	00	00	00	00	00	00	00				0	0
ney U														
Wilco														
xon	283.	14.0	18.0	37.5	25.5	29.0	24.0	40.5	37.5	281.0	12.00	15.00	37.50	24.00
W	000	00	00	00	00	00	00	00	00	00	0	0	0	0
Z	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-
	2.20	2.12	1.87	0.52	1.37	0.92	1.47	0	0.52	2.368	2.287	2.090	0.521	1.473
	7	7	8	1	4	5	3		1					
Asym														
p. Sig.	0.02	0.03	0.06	0.60	0.16	0.35	0.14	1.00	0.60	0.018	0.022	0.037	0.602	0.141
(2-														
tailed	7	3	0	2	9	5	1	0	2					
)														
Exact														
Sig.														
[2*(1-	.024 ^b	.032 ^b	.078 ^b	.821 ^b	.242 ^b	.395 ^b	.211 ^b	1.00	.821 ^b	.012 ^b	.018 ^b	.041 ^b	.821 ^b	.211 ^b
tailed								0 ^b						
Sig.)]														

Appendix Table 54

Observation Unit: Participants – Means Comparison – Phonetic Training

Phonetic Training	% of	% of	% of	% of	% of	% of	% of	% of	% of	% of	% of	% of	% of	% of	
	1s in AA WL	2s in AA WL	3s in AA WL	4s in AA WL	5s in AA WL	% of mispr in AA WL	3s in AAF S	4s in AAF S	5s in AAF S	1s in AAT total	2s in AAT total	3s in AAT total	4s in AAT total	5s in AAT total	
No	Mean	28.17	66.25	4.911	0.11	0.55	8.59	3.28	0.00	0.15	33.56	61.18	4.686	0.091	0.472
	Std. Deviation	50	19	1	09	11	90	47	00	39	79	14	8	7	2
Yes	Mean	28.86	27.50	10.98	0.43	1.13	4.15	9.27	0.00	0.53	26.49	24.63	9.924	0.366	0.996
	Std. Deviation	326	683	626	727	920	763	394	000	186	243	894	09	03	03
Total	Mean	77.56	22.43	0.000	0.00	0.00	6.51	0.00	0.00	0.00	78.05	21.94	0.000	0.000	0.000
	Std. Deviation	44	56	0	00	00	85	00	00	00	91	09	0	0	0
Total	Mean	16.23	16.23	0.000	0.00	0.00	3.61	0.00	0.00	0.00	15.79	15.79	0.000	0.000	0.000
	Std. Deviation	217	217	00	000	000	979	000	000	000	271	271	00	00	00
Total	Mean	33.87	61.19	4.344	0.09	0.48	8.35	2.90	0.00	0.13	38.70	56.65	4.146	0.081	0.417
	Std. Deviation	38	61	5	81	75	90	57	00	61	15	36	0	1	8
Total	Mean	31.82	29.84	10.42	0.41	1.08	4.08	8.76	0.00	0.50	29.11	26.78	9.434	0.344	0.946
	Std. Deviation	983	478	950	179	364	893	531	000	144	543	878	02	66	94

Section 07 Observation Unit: Words

Appendix Table 55

Observation Unit: Participants - Descriptive Statistics (Dependent Variables)

		Statistic	Std. Error
AAWL.1.perc	Mean	35.2952	0.80661
	95% Confidence Interval for Mean	Lower Bound	33.7057
		Upper Bound	36.8848
	5% Trimmed Mean	35.3023	
	Median	34.6154	
	Variance	146.390	
	Std. Deviation	12.09917	
	Minimum	0.00	
	Maximum	72.73	
	Range	72.73	
	Interquartile Range	16.00	
	Skewness	-0.043	0.162
	Kurtosis	0.173	0.323
AAWL.2.perc	Mean	59.7237	0.79615
	95% Confidence Interval for Mean	Lower Bound	58.1548
		Upper Bound	61.2926
	5% Trimmed Mean	59.7592	
	Median	60.0000	
	Variance	142.619	
	Std. Deviation	11.94230	
	Minimum	27.27	
	Maximum	100.00	
	Range	72.73	
	Interquartile Range	17.00	
	Skewness	0.015	0.162
	Kurtosis	0.069	0.323
AAWL.3.perc	Mean	4.4170	0.35731
	95% Confidence Interval for Mean	Lower Bound	3.7129
		Upper Bound	5.1211

	5% Trimmed Mean	3.7951	
	Median	4.0000	
	Variance	28.727	
	Std. Deviation	5.35972	
	Minimum	0.00	
	Maximum	50.00	
	Range	50.00	
	Interquartile Range	6.90	
	Skewness	3.450	0.162
	Kurtosis	23.346	0.323
	Mean	0.0719	0.03573
		Lower Bound	0.0015
	95% Confidence Interval for Mean	Upper Bound	0.1423
	5% Trimmed Mean	0.0000	
	Median	0.0000	
	Variance	0.287	
AAWL.4.perc	Std. Deviation	0.53599	
	Minimum	0.00	
	Maximum	4.17	
	Range	4.17	
	Interquartile Range	0.00	
	Skewness	7.360	0.162
	Kurtosis	52.701	0.323
	Mean	0.4922	0.10577
		Lower Bound	0.2837
	95% Confidence Interval for Mean	Upper Bound	0.7006
	5% Trimmed Mean	0.2115	
	Median	0.0000	
	Variance	2.517	
AAWL.5.perc	Std. Deviation	1.58661	
	Minimum	0.00	
	Maximum	10.00	
	Range	10.00	
	Interquartile Range	0.00	
	Skewness	3.421	0.162
	Kurtosis	11.951	0.323

Appendix Table 56

Observation Unit: Participants - Descriptive Statistics - Tests of Normality (Dependent Variables)

Tests of Normality						
	Kolmogorov-Smirnov^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
AAWL.1.perc	0.055	225	.200*	0.995	225	0.616
AAWL.2.perc	0.048	225	.200*	0.994	225	0.581
AAWL.3.perc	0.205	225	0.000	0.708	225	0.000
AAWL.4.perc	0.536	225	0.000	0.111	225	0.000
AAWL.5.perc	0.524	225	0.000	0.347	225	0.000

Note. a. Lilliefors Significance Correction

General Model Results

Appendix Table 57

Observation Unit: Participants - General Model Results - Dependent Variable: AAWL.I.perc -ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	9144.574	6	1524.096	14.051	.000 ^b
1	Residual	23646.768	218	108.471		
	Total	32791.342	224			

Note. a. Dependent Variable: AAWL.I.perc

b. Predictors: (Constant), Prec.CONSONANT, Prec.NORTH.Vowel, Prec.NEAR.Vowel, FREQUENCY, Prec.lettER.Vowel, STRESS.

Appendix Table 58

Observation Unit: Participants - General Model Results - Dependent Variable: AAWL.I.perc - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.528 ^a	0.279	0.259	10.41496	0.279	14.051	6	218	0.000

Note. a. Predictors: (Constant), Prec.CONSONANT, Prec.NORTH.Vowel, Prec.NEAR.Vowel, FREQUENCY, Prec.lettER.Vowel, STRESS

Appendix Table 59

Observation Unit: Participants - General Model Results - Dependent Variable: AAWL.I.perc - Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	17.598	4.166		4.224	0.000
FREQUENCY	0.005	0.002	0.184	3.104	0.002
STRESS	9.996	3.901	0.414	2.562	0.011
1 Prec.NEAR.Vowel	-10.403	2.733	-0.240	-3.806	0.000
Prec.NORTH.Vowel	-9.380	2.324	-0.260	-4.036	0.000
Prec.lettER.Vowel	14.282	3.853	0.588	3.707	0.000
Prec.CONSONANT	9.148	1.947	0.281	4.700	0.000

Appendix Table 60

Observation Unit: Participants - General Model Results - Dependent Variable: AAWL.1.perc - Bootstrap for Coefficients

Model	B	Bootstrap ^a				
		Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval	
					Lower	Upper
1 (Constant)	17.598	-0.166	4.763	0.001	8.764	27.421
FREQUENCY	0.005	0.001	0.003	0.008	0.003	0.013
STRESS	9.996	0.223	4.388	0.015	0.845	18.176
Prec.NEAR.Vowel	-10.403	-0.132	2.591	0.001	-15.586	-5.691
Prec.NORTH.Vowel	-9.380	-0.288	2.620	0.001	-14.876	-4.634
Prec.lettER.Vowel	14.282	0.221	4.409	0.001	5.390	22.629
Prec.CONSONANT	9.148	-0.126	2.111	0.001	4.809	13.028

Note. a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Appendix Table 61

Observation Unit: Participants - General Model Results - Dependent Variable: AAWL.2.perc -ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	6237.619	5	1247.524	10.627	.000 ^b
Residual	25708.931	219	117.392		
Total	31946.550	224			

Note. a. Dependent Variable: AAWL.2.perc

b. Predictors: (Constant), PRIMING.TOTAL_Pre_and_Postvoc, Prec.NEAR.Vowel, Prec.NORTH.Vowel, Prec.CONSONANT, FREQUENCY

Appendix Table 62

Observation Unit: Participants - General Model Results - Dependent Variable: AAWL.2.perc - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.442 ^a	0.195	0.177	10.83478	0.195	10.627	5	219	0.000

Note. a. Predictors: (Constant), PRIMING.TOTAL_Pre_and_Postvoc, Prec.NEAR.Vowel, Prec.NORTH.Vowel, Prec.CONSONANT, FREQUENCY

Appendix Table 63

Observation Unit: Participants - General Model Results - Dependent Variable: AAWL2.perc - Coefficients

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	68.183	2.435		27.999	0.000
FREQUENCY	-0.006	0.002	-0.203	-3.149	0.002
Prec.NEAR.Vowel	7.672	2.677	0.179	2.866	0.005
Prec.NORTH.Vowel	9.127	2.225	0.257	4.102	0.000
Prec.CONSONANT	-7.926	2.067	-0.247	-3.835	0.000
PRIMING.TOTAL_Pre_and_Postvoc	-5.464	1.615	-0.228	-3.383	0.001

Appendix Table 64

Observation Unit: Participants - General Model Results - Dependent Variable: AAWL2.perc - Bootstrap for Coefficients

Model	B	Bootstrap ^a				
		Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval	
					Lower	Upper
(Constant)	68.183	0.077	2.541	0.001	63.298	73.511
FREQUENCY	-0.006	-0.001	0.004	0.028	-0.017	-0.003
Prec.NEAR.Vowel	7.672	0.043	2.224	0.002	3.476	12.388
Prec.NORTH.Vowel	9.127	0.144	2.515	0.001	4.457	14.353
Prec.CONSONANT	-7.926	0.095	2.130	0.001	-12.191	-3.721
PRIMING.TOTAL_Pre_and_Postvoc	-5.464	-0.119	1.664	0.002	-8.730	-2.305

Note. a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Appendix Table 65

Observation Unit: Participants - General Model Results - Dependent Variable: AAWL3.perc -ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	147.148	1	147.148	5.219	.023 ^b
	Residual	6287.622	223	28.196		
	Total	6434.770	224			

Note. a. Dependent Variable: AAWL3.perc

b. Predictors: (Constant), CODA

Appendix Table 66

Observation Unit: Participants - General Model Results - Dependent Variable: AAWL3.perc - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.151 ^a	0.023	0.018	5.30995	0.023	5.219	1	223	0.023

Note. a. Dependent Variable: AAWL3.perc

b. Predictors: (Constant), CODA

Appendix Table 67

Observation Unit: Participants - General Model Results - Dependent Variable: AAWL3.perc - Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.654	0.487		7.506	0.000
	CODA	1.620	0.709	0.151	2.284	0.023

Appendix Table 68

Observation Unit: Participants - General Model Results - Dependent Variable: AAWL3.perc - Bootstrap for Coefficients

Model	B	Bootstrap ^a					
		Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval		
					Lower	Upper	
1	(Constant)	3.654	0.018	0.351	0.001	2.987	4.361

CODA	1.620	-0.022	0.727	0.035	0.286	3.115
-------------	-------	--------	-------	-------	-------	-------

Note. a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Detailed Model Results

Appendix Table 69

Observation Unit: Participants - Detailed Model Results - Dependent Variable: AAWL.1.perc - ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11251.014	8	1406.377	14.103	.000 ^b
	Residual	21540.328	216	99.724		
	Total	32791.342	224			

Note. a. Dependent Variable: AAWL.1.perc

b. Predictors: (Constant), Prec.lettER.Vowel, Prec.CON.TYPE.B, PRIMING.Prevoc.RVCVr, CODA.TYPE.C, FREQUENCY, Prec.NEAR.Vowel, Prec.NORTH.Vowel, Prec.CON.TYPE.A

Appendix Table 70

Observation Unit: Participants - Detailed Model Results - Dependent Variable: AAWL.1.perc - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.586 ^a	0.343	0.319	9.98618	0.343	14.103	8	216	0.000

Note. a. Dependent Variable: AAWL.3.perc

b. Predictors: (Constant), Prec.lettER.Vowel, Prec.CON.TYPE.B, PRIMING.Prevoc.RVCVr, CODA.TYPE.C, FREQUENCY, Prec.NEAR.Vowel, Prec.NORTH.Vowel, Prec.CON.TYPE.A

Appendix Table 71

Observation Unit: Participants - Detailed Model Results - Dependent Variable: AAWL.1.perc - Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	Prec.NORTH.Vowel	-9.786	2.198	-0.272	-4.453	0.000
	Prec.NEAR.Vowel	-10.942	2.621	-0.252	-4.175	0.000
	CODA.TYPE.C	-10.888	2.769	-0.225	-3.932	0.000
	Prec.lettER.Vowel	3.941	1.612	0.162	2.445	0.015
	Prec.CON.TYPE.A	4.568	1.657	0.173	2.757	0.006

FREQUENCY	0.005	0.002	0.198	3.463	0.001
PRIMING.Prevoc.RVCVr	6.373	1.783	0.206	3.574	0.000
Prec.CON.TYPE.B	6.376	1.645	0.241	3.875	0.000
(Constant)	31.371	1.618		19.390	0.000

Appendix Table 72

Observation Unit: Participants - Detailed Model Results - Dependent Variable: AAWL.1.perc - Bootstrap for Coefficients

Model	B	Bootstrap ^a				
		Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval	
					Lower	Upper
(Constant)	31.371	-0.017	1.457	0.001	28.427	34.099
PRIMING.Prevoc.RVCVr	6.373	0.157	1.978	0.001	2.633	10.153
Prec.CON.TYPE.A	4.568	-0.022	1.555	0.004	1.224	7.385
Prec.CON.TYPE.B	6.376	-0.128	1.564	0.001	3.251	9.477
1 CODA.TYPE.C	-10.888	-0.129	2.094	0.001	-15.039	-6.647
FREQUENCY	0.005	0.001	0.004	0.034	0.003	0.017
Prec.NEAR.Vowel	-10.942	-0.133	2.660	0.001	-16.795	-6.263
Prec.NORTH.Vowel	-9.786	-0.223	2.515	0.001	-15.334	-5.098
Prec.lettER.Vowel	3.941	-0.043	1.508	0.008	1.017	6.799

Note. a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Appendix Table 73

Observation Unit: Participants - Detailed Model Results - Dependent Variable: AAWL.2.perc - ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	11721.758	12	976.813	10.239	.000 ^b
Residual	20224.792	212	95.400		
Total	31946.550	224			

Note. a. Dependent Variable: AAWL.2.perc

b. Predictors: (Constant), Prec.lettER.Vowel, Prec.CON.TYPE.B, PRIMING.Prevoc.RVCVr, CODA.TYPE.B, FREQUENCY, Prec.CON.TYPE.D, Prec.NEAR.Vowel, Prec.CON.TYPE.C, Prec.NORTH.Vowel, CODA.TYPE.C, PRIMING.Postvoc.VRCVr, Prec.CON.TYPE.A

Appendix Table 74

Observation Unit: Participants - Detailed Model Results - Dependent Variable: AAWL.2.perc - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.606 ^a	0.367	0.331	9.76729	0.367	10.239	12	212	0.000

Note. a. Predictors: (Constant), Prec.lettER.Vowel, Prec.CON.TYPE.B, PRIMING.Prevoc.RVCVr, CODA.TYPE.B, FREQUENCY, Prec.CON.TYPE.D, Prec.NEAR.Vowel, Prec.CON.TYPE.C, Prec.NORTH.Vowel, CODA.TYPE.C, PRIMING.Postvoc.VRCVr, Prec.CON.TYPE.A.

Appendix Table 75

Observation Unit: Participants - Detailed Model Results - Dependent Variable: AAWL.2.perc - Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Prec.CON.TYPE.B	-11.021	2.368	-0.423	-4.654	0.000
Prec.CON.TYPE.A	-9.483	2.411	-0.364	-3.933	0.000
Prec.lettER.Vowel	-6.769	2.055	-0.283	-3.295	0.001
Prec.CON.TYPE.C	-7.065	2.534	-0.237	-2.787	0.006
CODA.TYPE.B	-5.697	1.476	-0.223	-3.859	0.000
FREQUENCY	-0.006	0.002	-0.210	-3.682	0.000
PRIMING.Prevoc.RVCVr	-5.877	1.885	-0.192	-3.117	0.002
1 Prec.CON.TYPE.D	-7.777	4.272	-0.128	-1.821	0.070
Prec.NEAR.Vowel	7.216	2.578	0.168	2.799	0.006
CODA.TYPE.C	9.066	2.963	0.190	3.060	0.002
PRIMING.Postvoc.VRCVr	5.924	2.374	0.210	2.495	0.013
Prec.NORTH.Vowel	8.696	2.163	0.245	4.021	0.000
(Constant)	70.455	2.385		29.537	0.000

Appendix Table 76

Observation Unit: Participants - Detailed Model Results - Dependent Variable: AAWL.2.perc - Bootstrap for Coefficients

Model	B	Bootstrap ^a				
		Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval	
					Lower	Upper
(Constant)	70.455	-0.252	2.385	0.001	65.613	75.046
PRIMING.Prevoc.RVCVr	-5.877	-0.074	2.218	0.013	-10.380	-1.595
Prec.CON.TYPE.A	-9.483	0.352	2.482	0.001	-14.081	-4.181
Prec.CON.TYPE.B	-11.021	0.234	2.467	0.001	-15.610	-5.965
Prec.CON.TYPE.C	-7.065	0.256	2.540	0.005	-11.859	-1.544
Prec.CON.TYPE.D	-7.777	0.183	3.684	0.026	-15.211	-0.783
CODA.TYPE.B	-5.697	0.081	1.553	0.001	-8.630	-2.586
CODA.TYPE.C	9.066	0.021	1.900	0.001	5.290	12.902
PRIMING. Postvoc.VRCVr	5.924	-0.189	2.348	0.010	0.979	10.061
FREQUENCY	-0.006	-0.001	0.003	0.006	-0.015	-0.004
Prec.NEAR.Vowel	7.216	0.020	2.415	0.006	2.392	11.881
Prec.NORTH.Vowel	8.696	0.264	2.448	0.002	4.488	14.127
Prec.lettER.Vowel	-6.769	0.135	1.954	0.003	-10.504	-2.922

Note. a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Appendix Table 77

Observation Unit: Participants - Detailed Model Results - Dependent Variable: AAWL.3.perc -ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	494.702	2	247.351	9.244	.000 ^b
Residual	5940.068	222	26.757		
Total	6434.770	224			

Note. a. Dependent Variable: AAWL.3.perc

b. Predictors: (Constant), PRIMING. Postvoc.VRCVr , CODA.TYPE.B

Appendix Table 78

Observation Unit: Participants - Detailed Model Results - Dependent Variable: AAWL.3.perc - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.277 ^a	0.077	0.069	5.17272	0.077	9.244	2	222	0.000

Note. a. Predictors: (Constant), PRIMING. Postvoc.VRCVr , CODA.TYPE.B.

Appendix Table 79

Observation Unit: Participants - Detailed Model Results - Dependent Variable: AAWL.3.perc - Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	4.065	0.443	9.171	0.000
	CODA.TYPE.B	2.798	0.753	3.717	0.000
	PRIMING. Postvoc.VRCVr	-2.353	0.833	-2.825	0.005

Appendix Table 80

Observation Unit: Participants - Detailed Model Results - Dependent Variable: AAWL.3.perc - Bootstrap for Coefficients

Model	B	Bootstrap ^a					
		Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval		
					Lower	Upper	
1	(Constant)	4.065	0.005	0.370	0.001	3.370	4.806
	CODA.TYPE.B	2.798	0.026	0.912	0.004	1.219	4.675
	PRIMING. Postvoc.VRCVr	-2.353	-0.010	0.756	0.004	-3.935	-0.908

Note. a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples.

Section 08 Priming

Appendix Table 81

Spearman's Rho Correlation Coefficients for the Preceding /r/ and the Following Non-Prevocalic /r/

		Correlation Coefficients														
		Foll. r.A. 1s	Foll. r.A. 2s	Foll. r.A. 3s	Foll. r.B.1 s	Foll. r.B.2 s	Foll. r.B.3 s	Foll. r.C. 1s	Foll. r.C. 2s	Foll. r.C. 3s	Foll. r.D. 1s	Foll. r.D. 2s	Foll. r.D. 3s	Foll. r.E.1 s	Foll. r.E.2 s	Foll. r.E.3 s
Spearman's rho	Prec. r.A.2 s	-	.549*	-	-	.394*	0.37	0.15	0.11	0.22	0.08	0.13	.496*	0.10	0.17	-
	Prec. r.A.3 s	0.03	-	.682*	0.08	-.414*	.407*	0.04	0.16	0.07	0.11	0.22	.393*	0.13	0.35	0.33
	Prec. r.B.2 s	0.05	.423*	0.32	0.02	.457*	-.429*	0.28	0.03	-0.31	0.22	0.11	-.491*	0.18	0.09	-.526*
	Prec. r.B.3 s	0.38	0.01	.433*	0.26	0.11	.676*	-.511*	0.27	.503*	-.526*	0.36	.697*	-.487*	0.18	-.522*
	Prec. r.C.2 s	.603*	0.26	-0.3	.689*	0.28	.685*	.563*	0.34	0.27	.749*	-.608*	-.588*	.737*	-.562*	-.518*
	Prec. r.C.3 s	-0.34	0.12	.555*	0.31	0.14	.697*	-.537*	0.30	.532*	-.553*	0.33	.762*	-.524*	0.23	.662*
	Prec. r.C.4 s	0.23	0.09	0.32	0.19	0.11	.518*	-.444*	0.08	.530*	-.407*	0.05	.735*	0.36	0	.545*
	Prec. r.D.2 s	0.23	0.18	-.439*	0.14	0.04	0.35	0.31	0.19	0.29	0.19	0.08	-0.31	0.20	0.01	0.35
	Prec. r.D.3 s	0.12	0.30	.482*	0.15	0.16	.413*	0.29	0.17	0.25	0.31	0.13	.496*	0.20	0.06	.521*
	Prec. r.E.1 s	.718*	-.449*	0.26	.635*	-.413*	-.493*	.884*	-.708*	-.665*	.852*	-.614*	-.455*	.876*	-.697*	-.520*
	Prec. r.E.2 s	-.515*	.690*	0.04	0.38	.567*	0.03	-.527*	.687*	0.22	-.460*	.554*	0.18	.532*	.690*	0.06
	Prec. r.E.3 s	0.34	0.01	0.37	0.31	0.06	.709*	-.544*	0.31	.470*	.635*	.417*	.644*	-.541*	0.24	.590*
	Prec. r.E.4 s	0.16	0.18	.531*	0.26	-0.24	.408*	0.30	0.02	0.38	0.28	-0.04	.531*	0.18	0.14	.393*